

CCA GCA ACC AAT GAT GCC CGT T-TAMRA-3'  
 CA GCA ACC AAT GAT GCC CGT T-TAMRA-3'

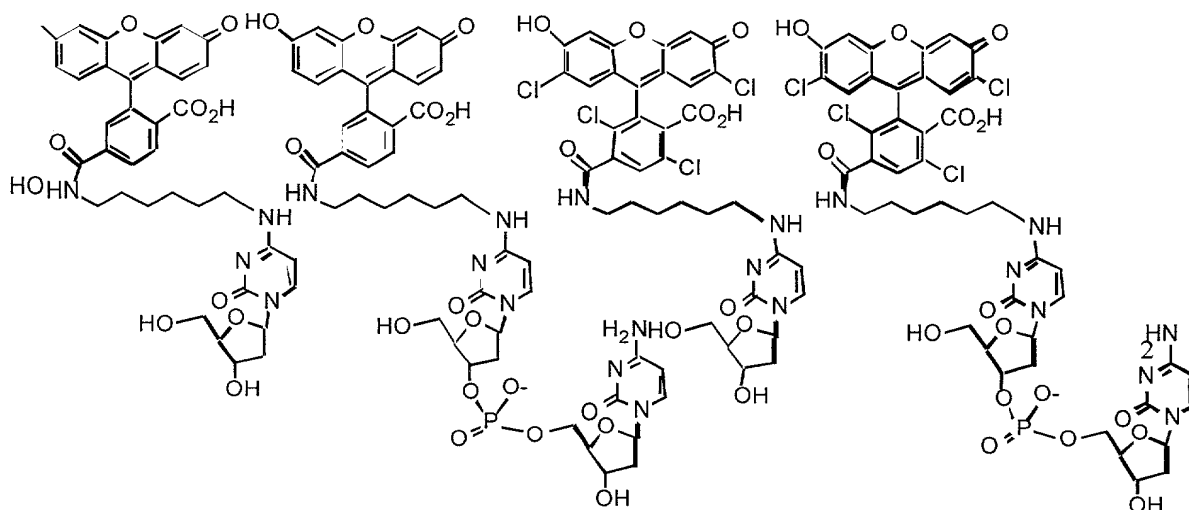
CCA GCA AGC ACT GAT GCC TGT T-TAMRA-3'  
 CA GCA AGC ACT GAT GCC TGT T-TAMRA-3'

**Fig. 1A**

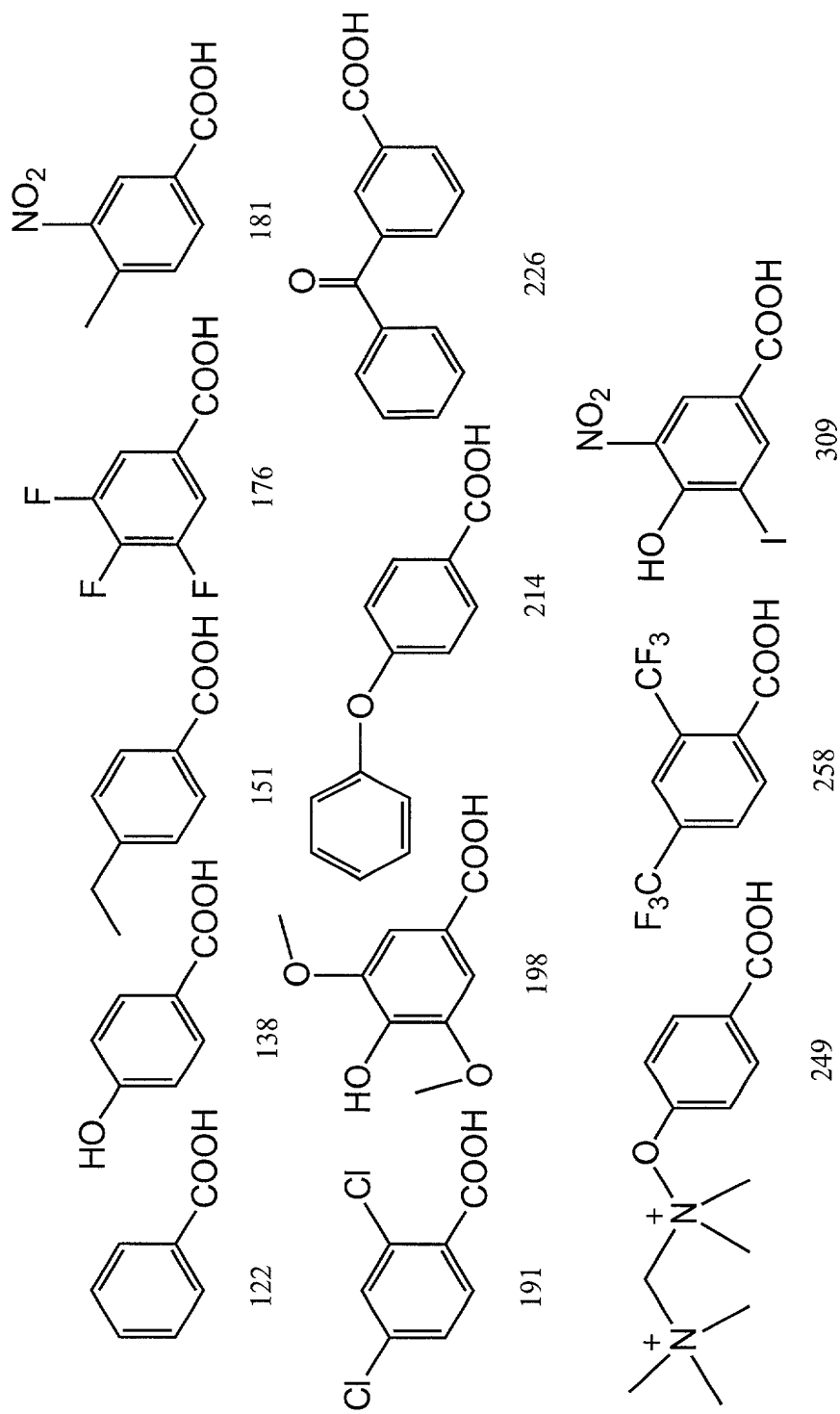
	Fluorescent Dyes	
	<u>Absorbance Maxima</u>	<u>Emission Maxima</u>
Fluorescein	494nm	525nm
Tetrachloro fluorescein	521nm	536nm
TAMRA	565nm	580nm

**Fig. 1B**

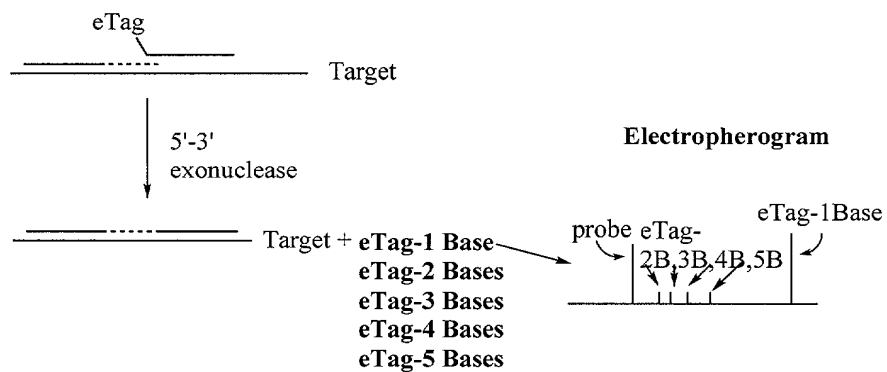
Cleaved Fragments:



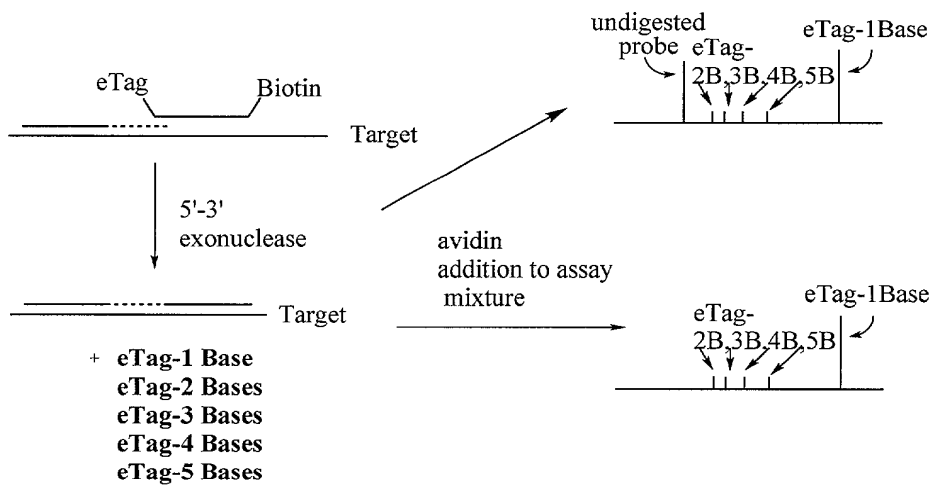
**Fig. 1C**



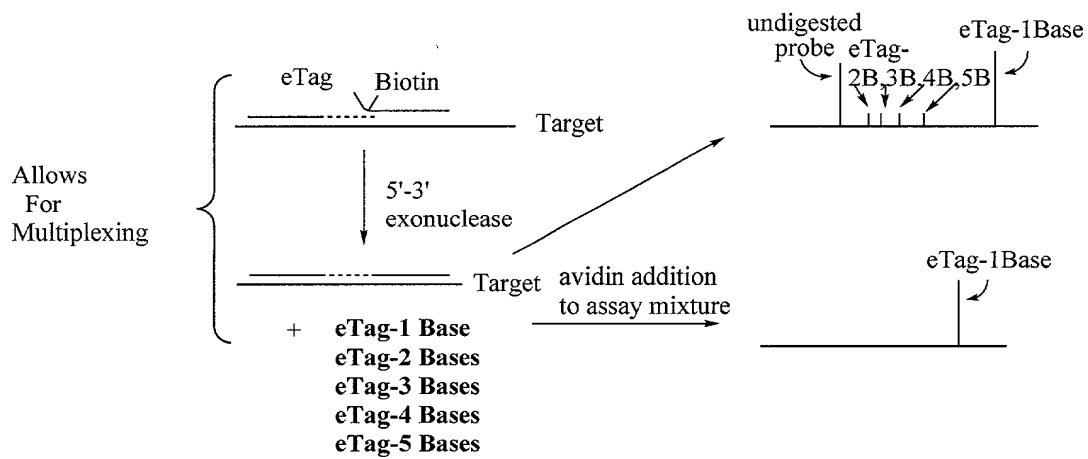
**Fig. 2**



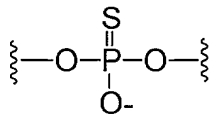
**Fig. 3A**



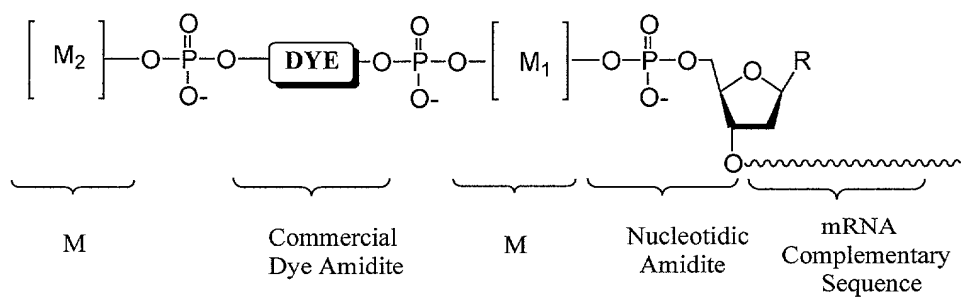
**Fig. 3B**



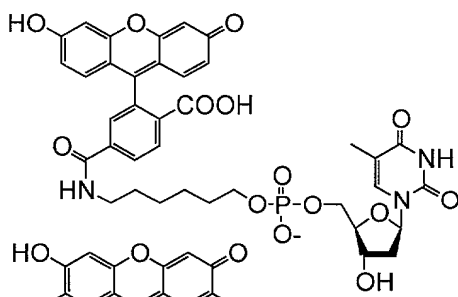
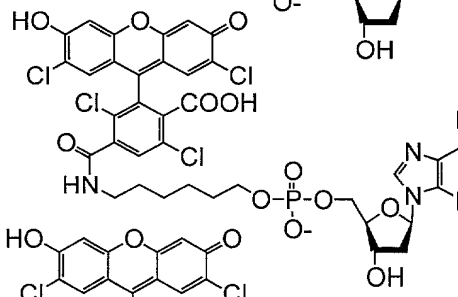
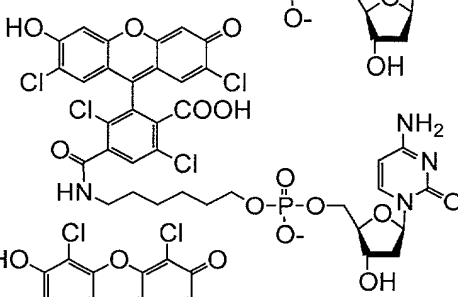
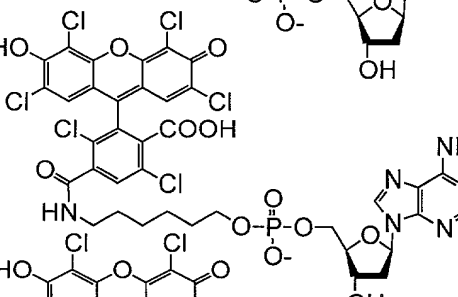
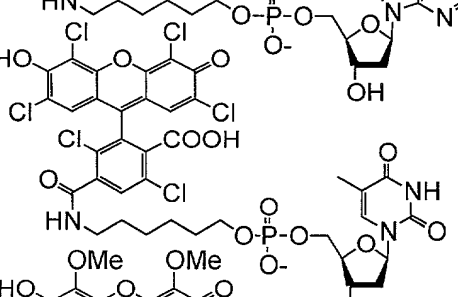
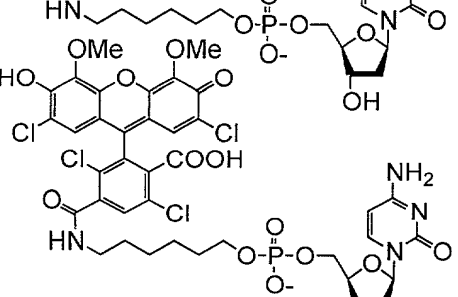
**Fig. 3C**



**Fig. 3D**



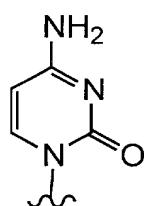
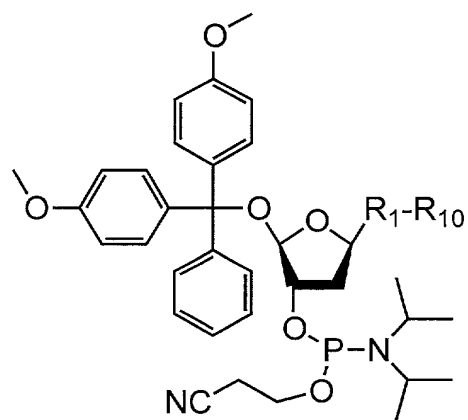
**Fig. 4**

<b>e-tag Reporter</b>	<b>Elution Time on CE, min</b>	<b>Mass</b>
	6.4	778
	7.1	925
	7.3	901
	7.7	994
	8.0	985
	9.25	961

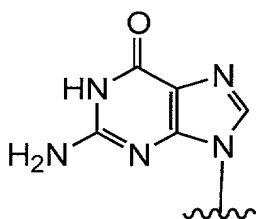
**Fig. 5**

e-tag Reporter	Charge	Elution Time, min
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{Fluorescein} \\   \\ \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_3\text{C}_3\text{C}_3\text{C}_3\text{C}_3\text{---} \text{dC} \\   \\ \text{O}^- \end{array}$	-8	12.1*
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{Fluorescein} \\   \\ \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_6\text{C}_6\text{C}_6\text{C}_6\text{C}_6\text{C}_6\text{---} \text{dC} \\   \\ \text{O}^- \end{array}$	-9	12.7
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{Fluorescein} \\   \\ \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_6\text{C}_6\text{C}_6\text{C}_6\text{C}_6\text{---} \text{dC} \\   \\ \text{O}^- \end{array}$	-8	12.8
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{Fluorescein} \\   \\ \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_6\text{C}_6\text{C}_6\text{C}_6\text{---} \text{dC} \\   \\ \text{O}^- \end{array}$	-7	13.1
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{Fluorescein} \\   \\ \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_3\text{C}_3\text{C}_9\text{---} \text{dC} \\   \\ \text{O}^- \end{array}$	-6	13.0
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{Fluorescein} \\   \\ \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_6\text{C}_6\text{C}_6\text{---} \text{dC} \\   \\ \text{O}^- \end{array}$	-6	13.4
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{Fluorescein} \\   \\ \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_3\text{C}_3\text{---} \text{dC} \\   \\ \text{O}^- \end{array}$	-5	12.8*
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{Fluorescein} \\   \\ \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_3\text{C}_9\text{---} \text{dC} \\   \\ \text{O}^- \end{array}$	-5	13.2*
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{Fluorescein} \\   \\ \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_9\text{C}_9\text{---} \text{dC} \\   \\ \text{O}^- \end{array}$	-5	14.8
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{Fluorescein} \\   \\ \text{---} \text{P} \text{---} \text{O} \text{---} \text{TTTdC} \\   \\ \text{O}^- \end{array}$	-6	17.3
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{Fluorescein} \\   \\ \text{---} \text{P} \text{---} \text{O} \text{---} \text{TTdC} \\   \\ \text{O}^- \end{array}$	-5	17.0
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{Fluorescein} \\   \\ \text{---} \text{P} \text{---} \text{O} \text{---} \text{C}_9\text{---} \text{dT} \\   \\ \text{O}^- \end{array}$	-4	15.2*
$\begin{array}{c} \text{O} \\ \parallel \\ \text{HN} \text{---} \text{Fluorescein} \\   \\ \text{---} \text{P} \text{---} \text{O} \text{---} \text{TdC} \\   \\ \text{O}^- \end{array}$	-4	16.5

**Fig. 6**



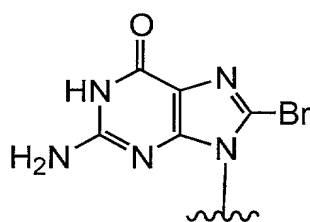
227



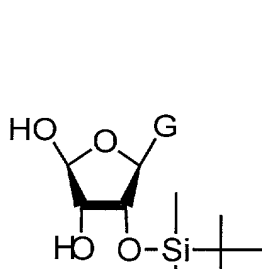
267



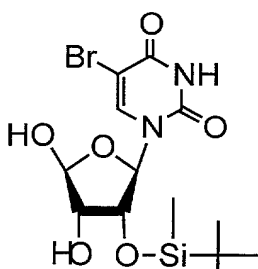
306



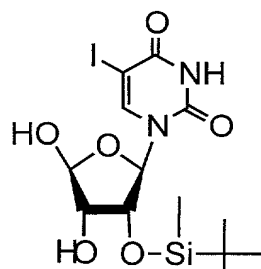
346



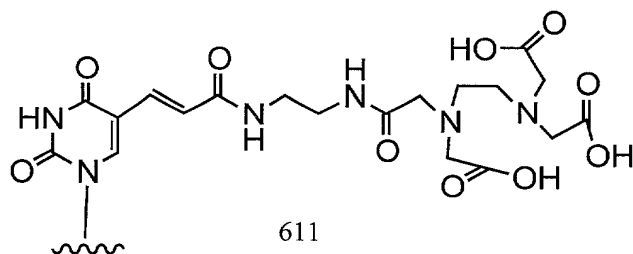
396



436



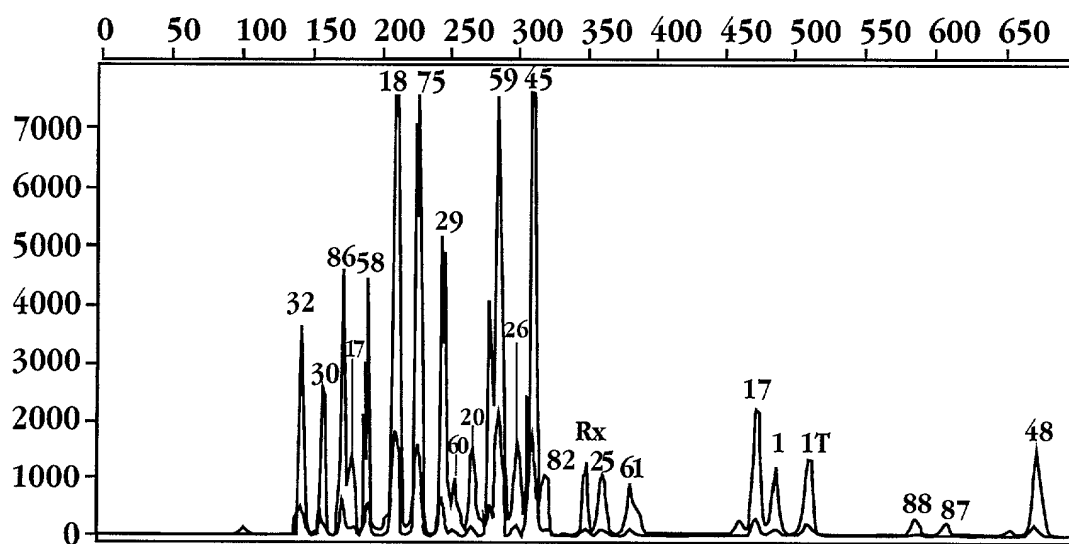
484



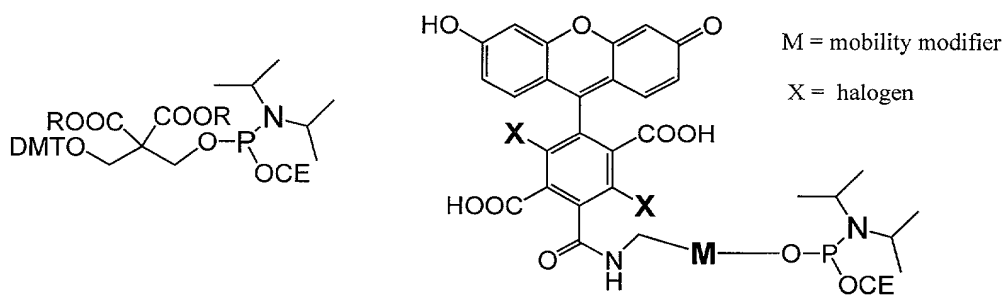
611

**Fig. 7**

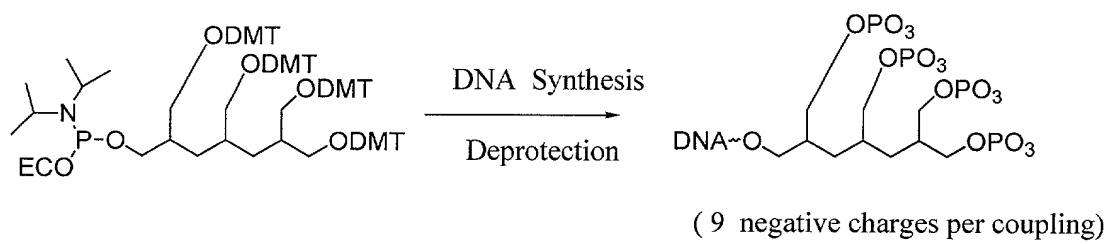




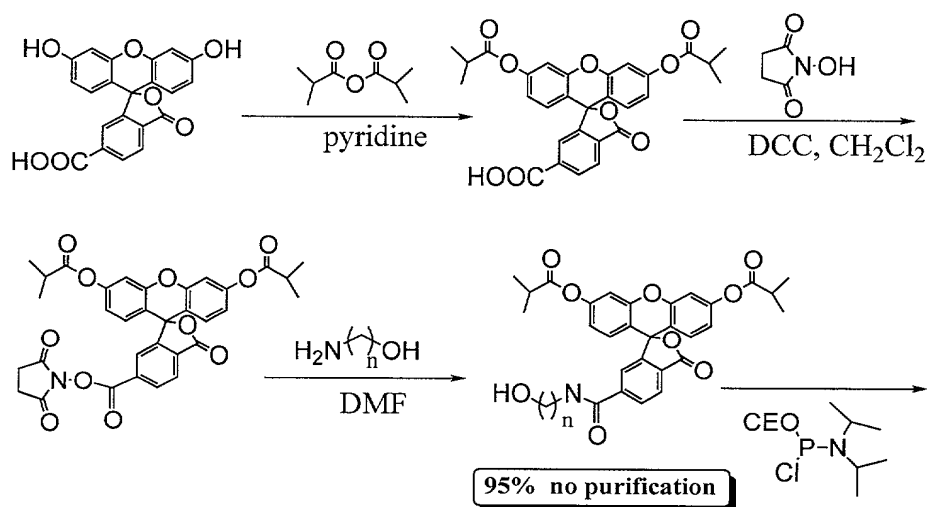
**Fig. 8**



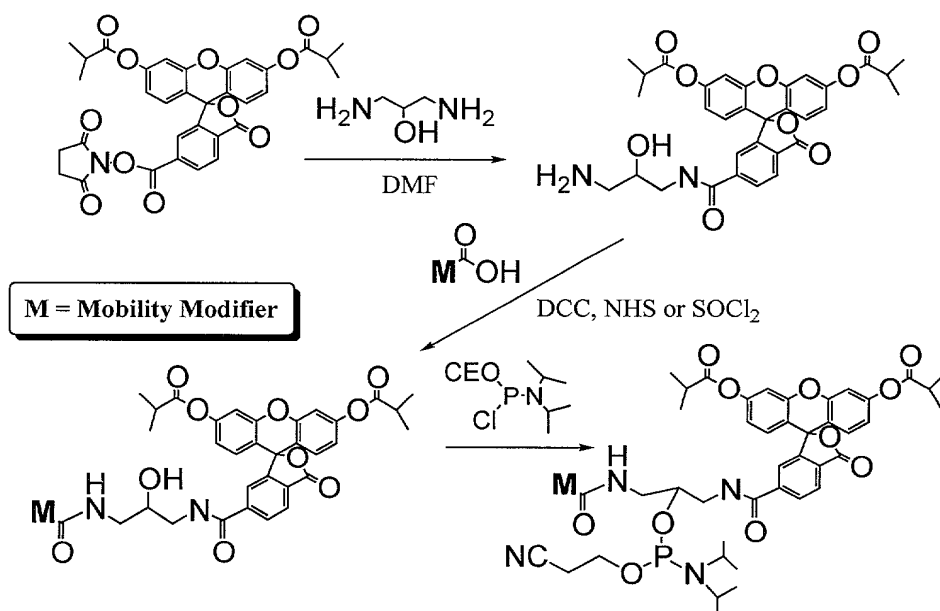
**Fig. 9**



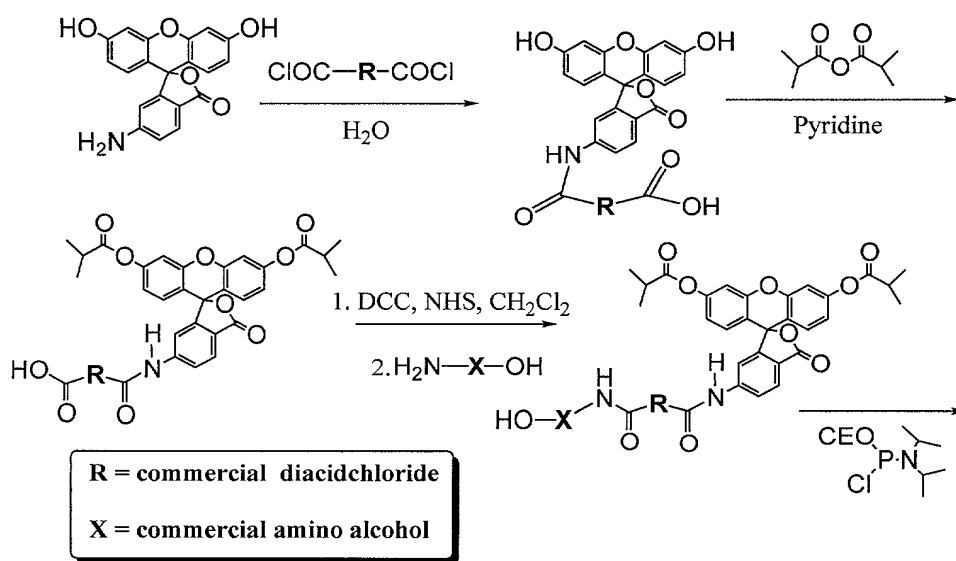
**Fig. 10**



**Fig. 11**

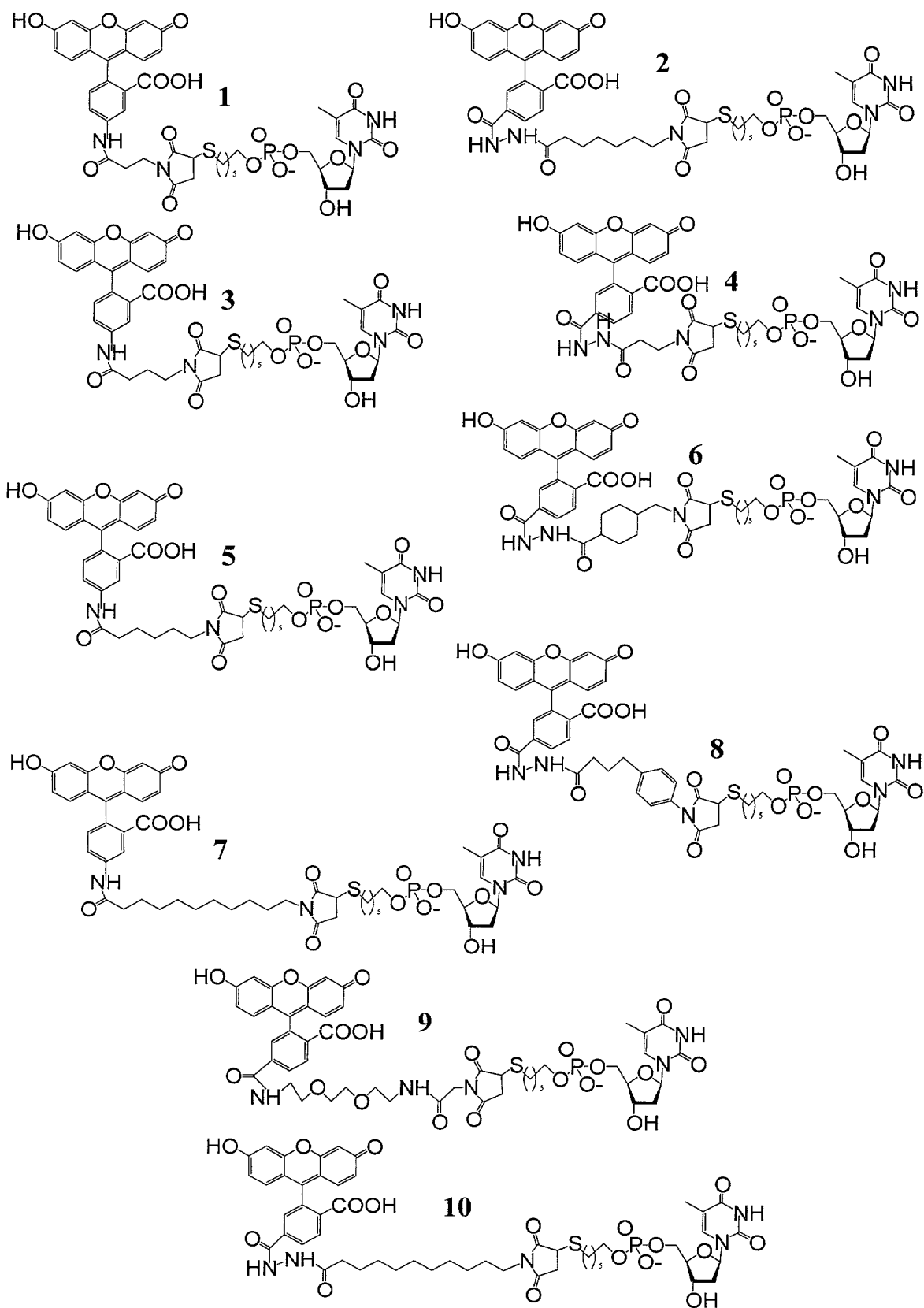


**Fig. 12**



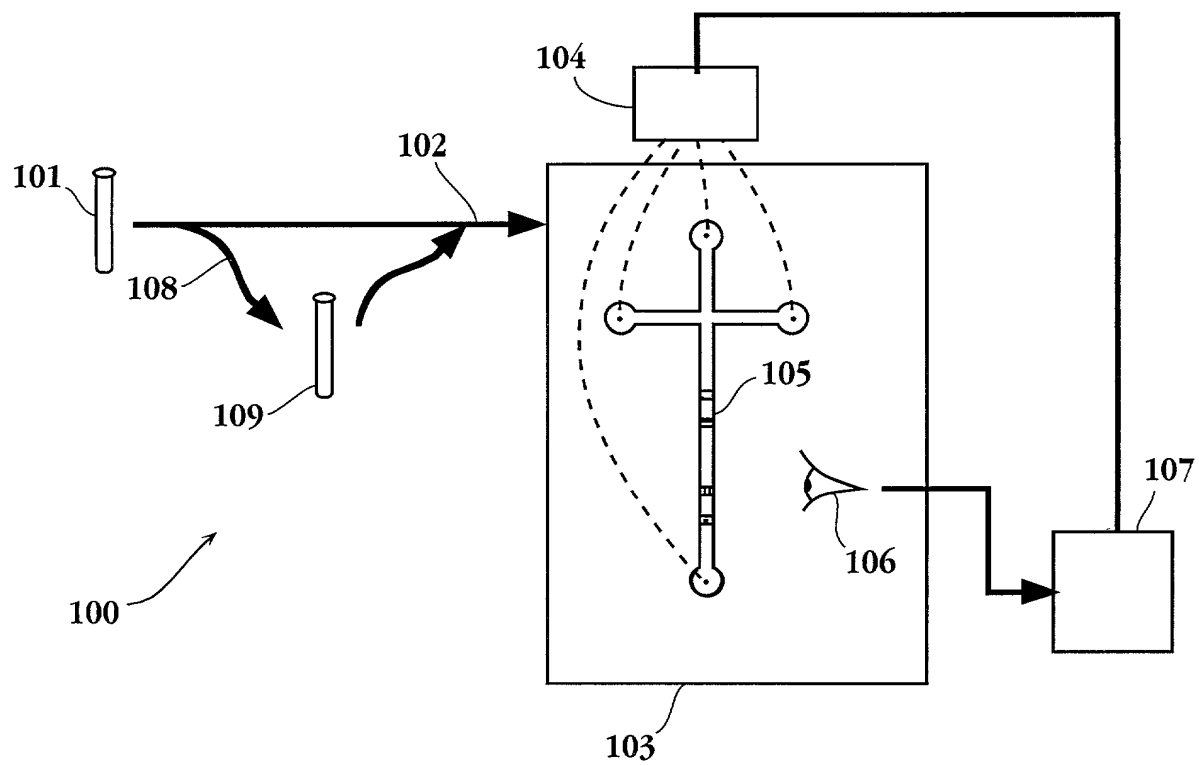
**Fig. 13**





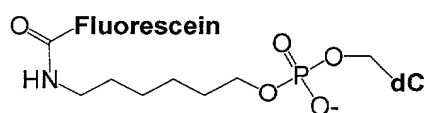
**Fig. 15**



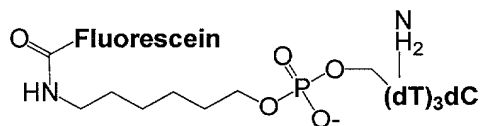


**Fig. 16**

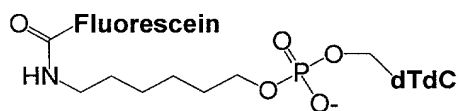
**ACLA001**



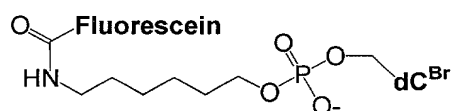
**ACLA007**



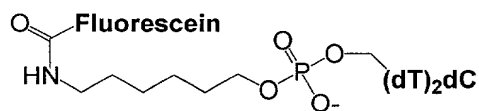
**ACLA002**



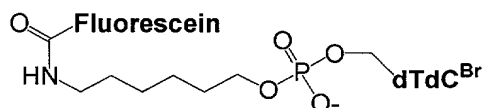
**ACLA008**



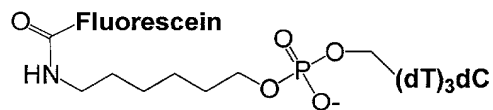
**ACLA003**



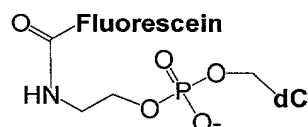
**ACLA009**



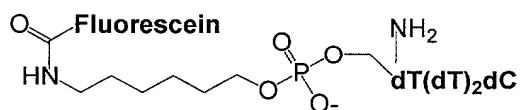
**ACLA004**



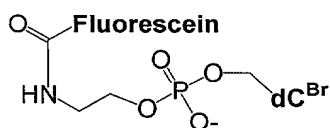
**ACLA010**



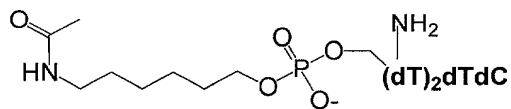
**ACLA005**



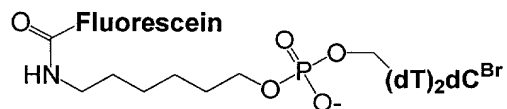
**ACLA011**



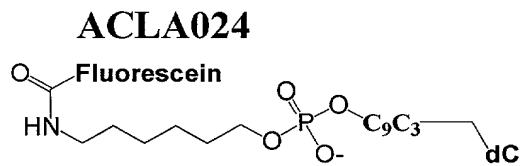
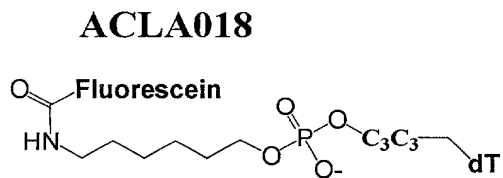
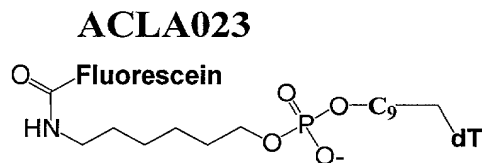
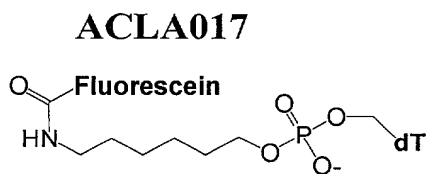
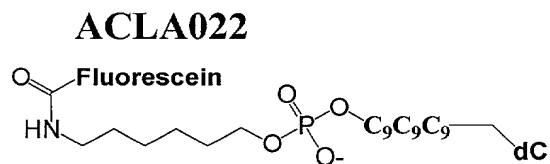
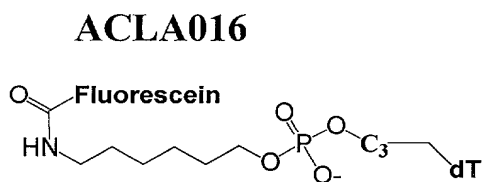
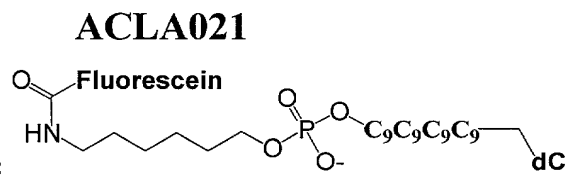
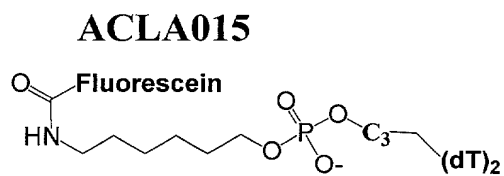
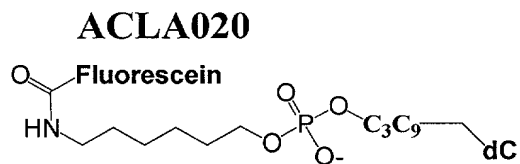
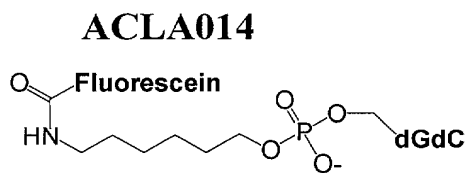
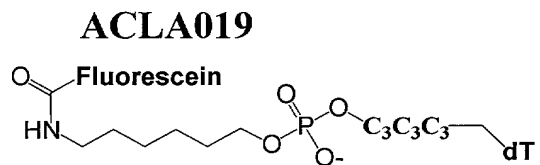
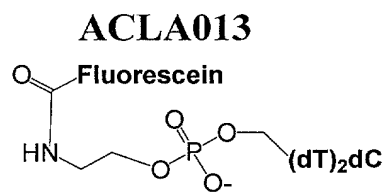
**ACLA006**



**ACLA012**

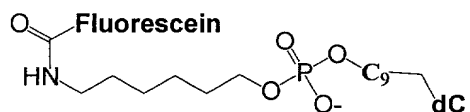


**Fig. 17A**

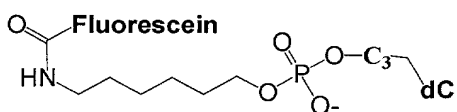


**Fig. 17B**

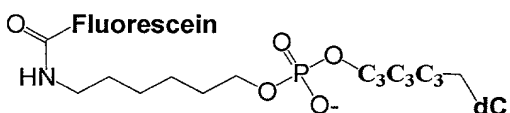
**ACLA025**



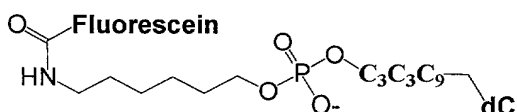
**ACLA026**



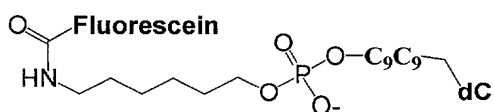
**ACLA027**



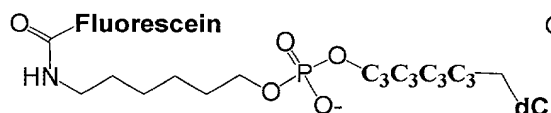
**ACLA028**



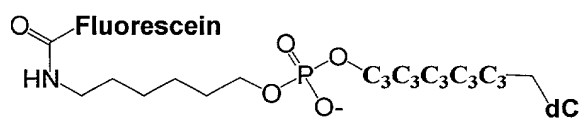
**ACLA029**



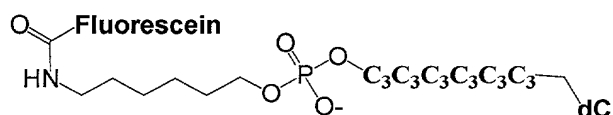
**ACLA030**



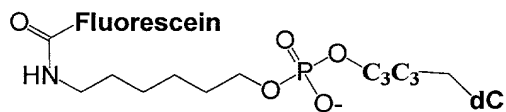
**ACLA031**



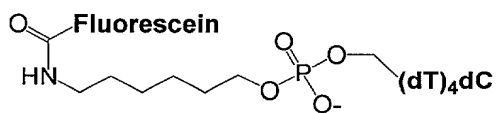
**ACLA032**



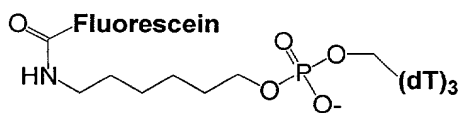
**ACLA033**



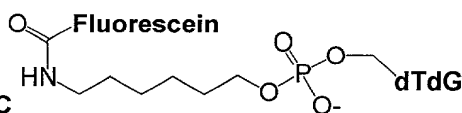
**ACLA034**



**ACLA035**

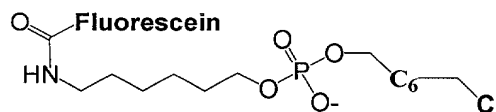


**ACLA036**

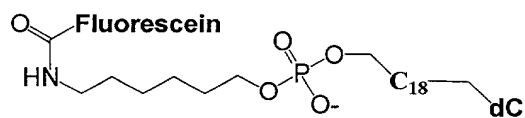


**Fig. 17C**

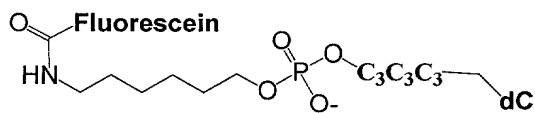
**ACLA037**



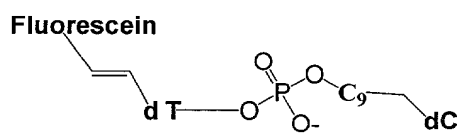
**ACLA038**



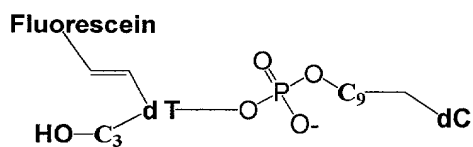
**ACLA039**



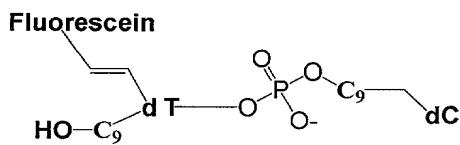
**ACLA040**



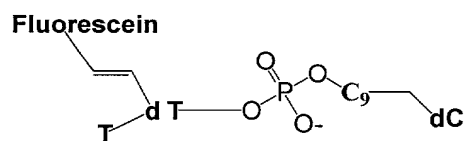
**ACLA041**



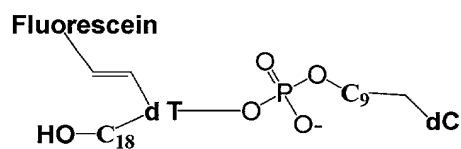
**ACLA042**



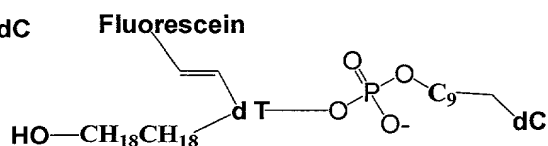
**ACLA043**



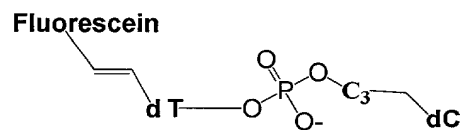
**ACLA044**



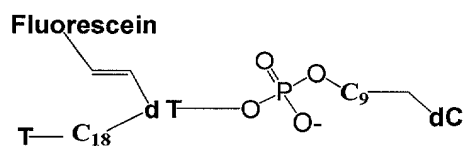
**ACLA045**



**ACLA046**

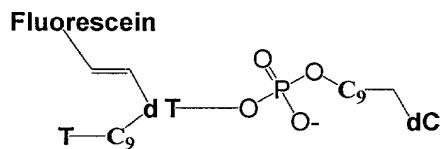


**ACLA047**

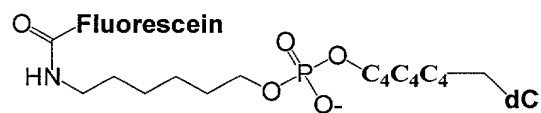


**Fig. 17D**

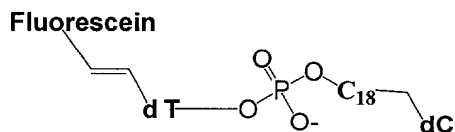
**ACLA048**



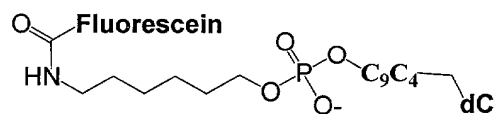
**ACLA054**



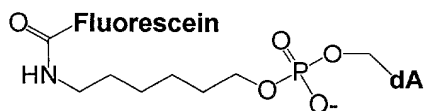
**ACLA049**



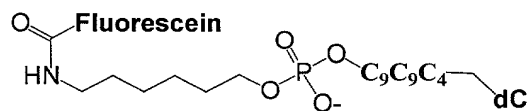
**ACLA055**



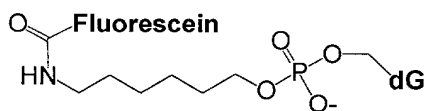
**ACLA050**



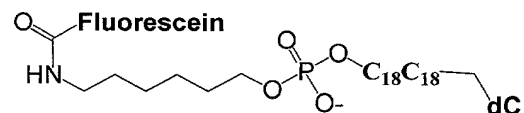
**ACLA056**



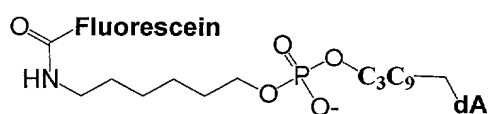
**ACLA051**



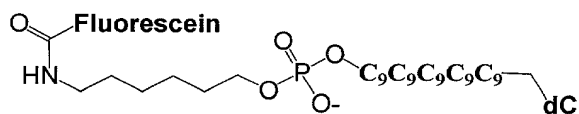
**ACLA057**



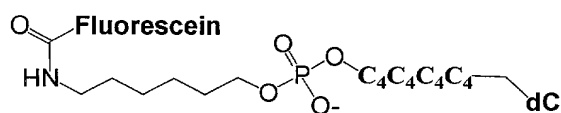
**ACLA052**



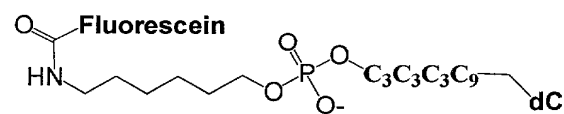
**ACLA058**



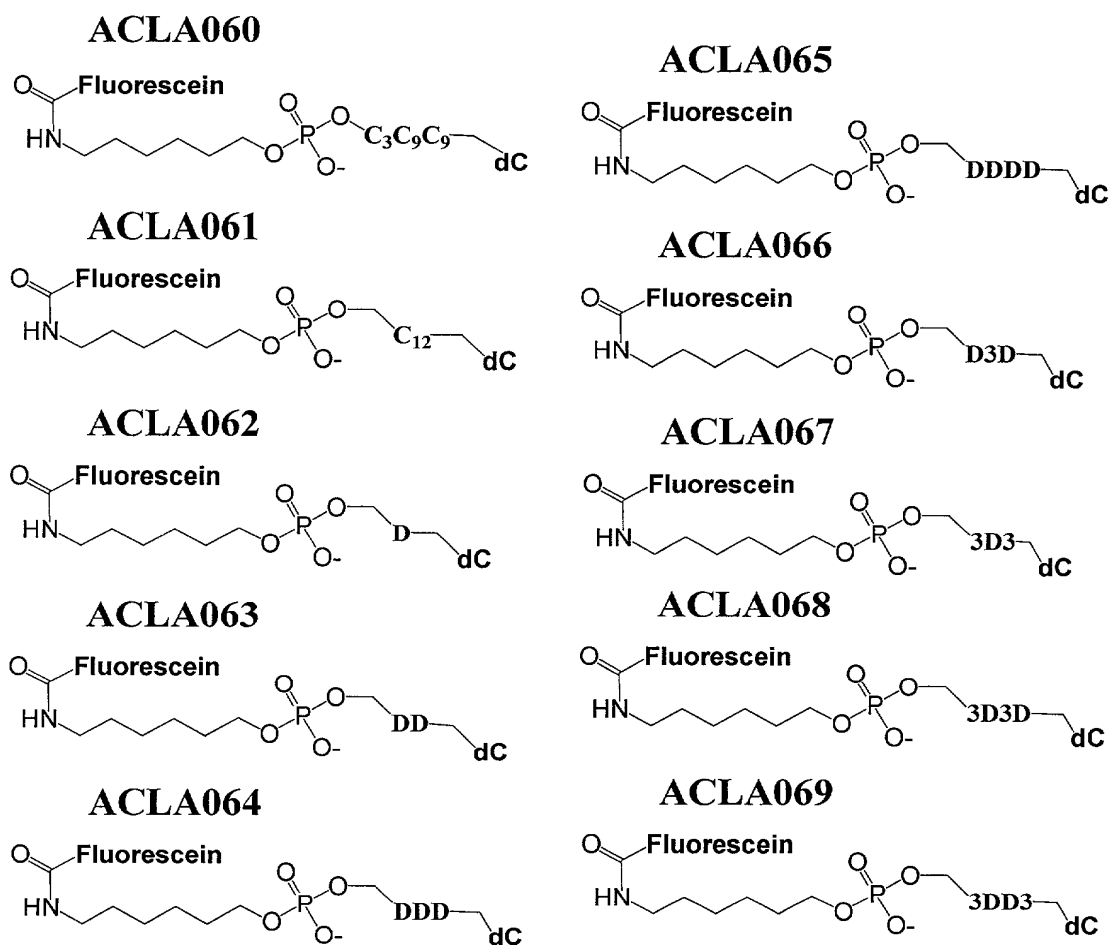
**ACLA053**



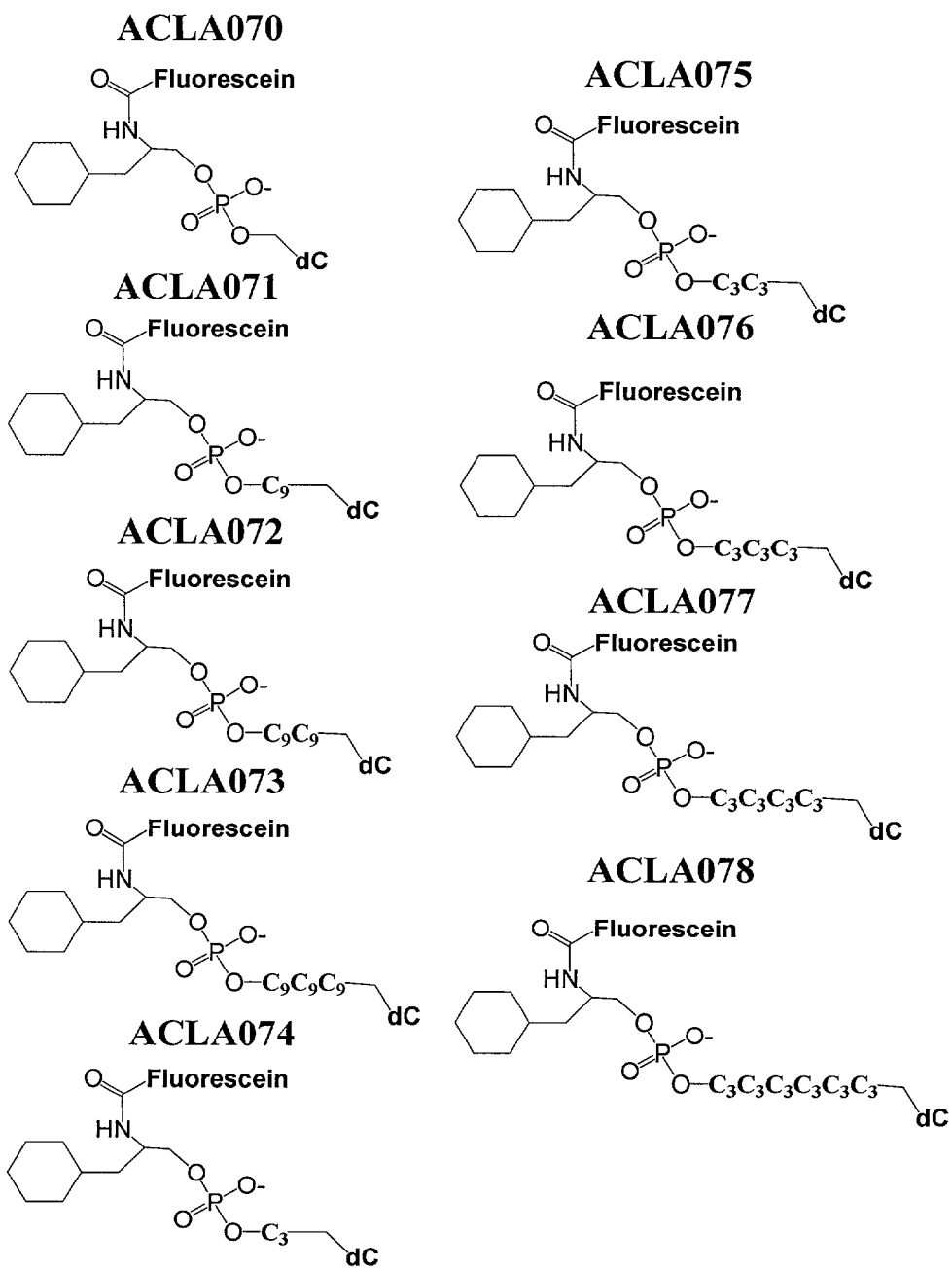
**ACLA059**



**Fig. 17E**

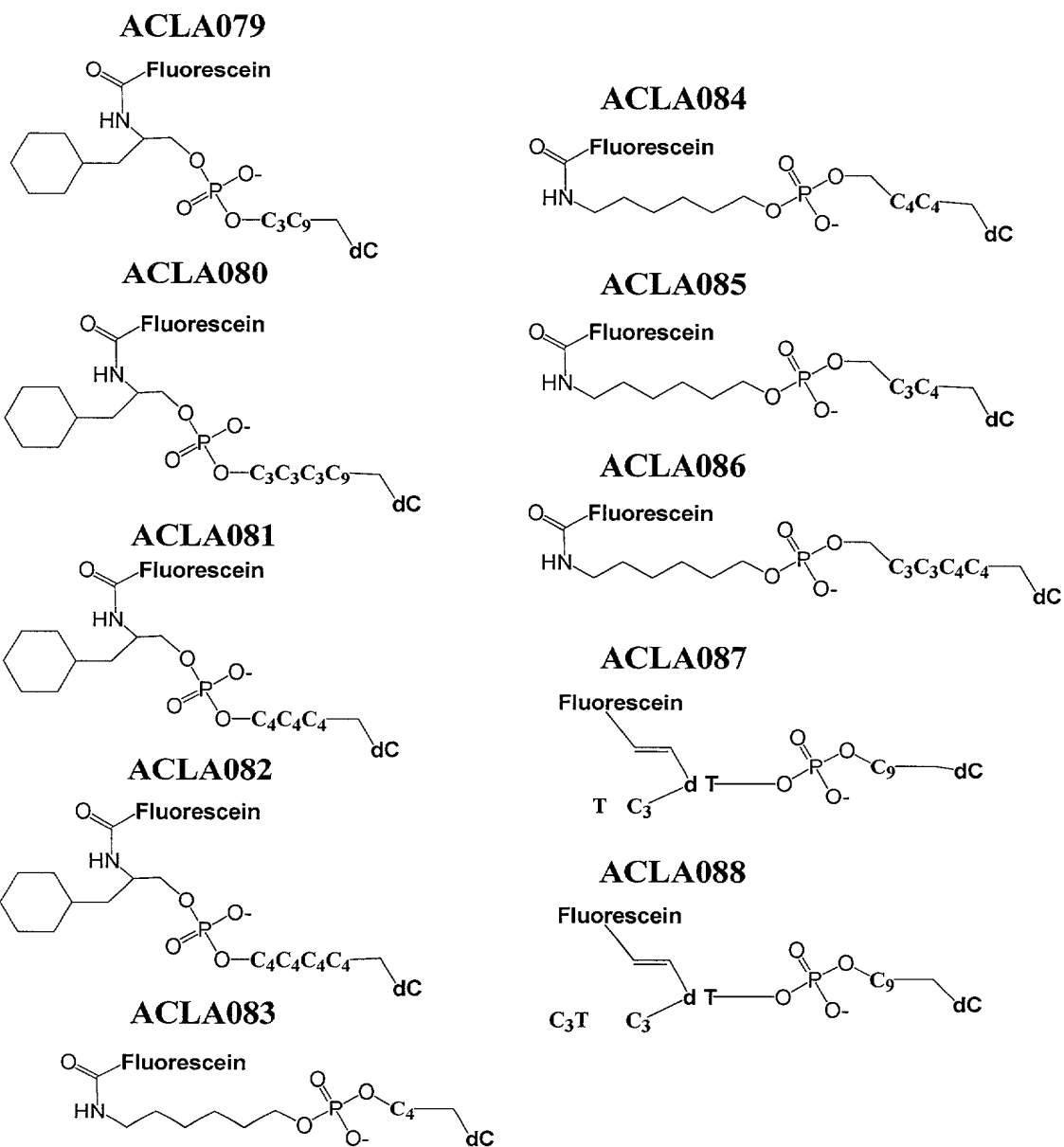


**Fig. 17F**



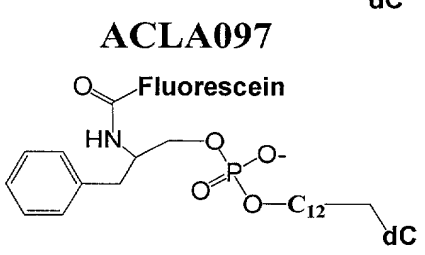
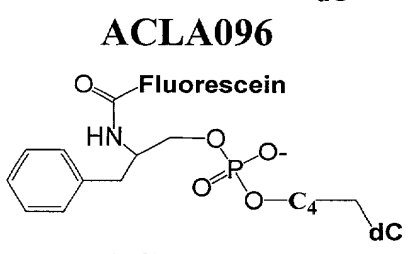
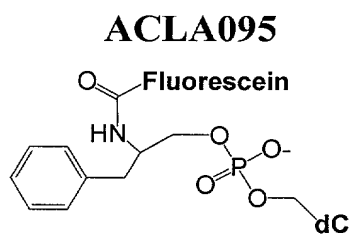
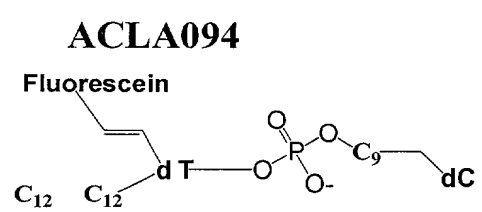
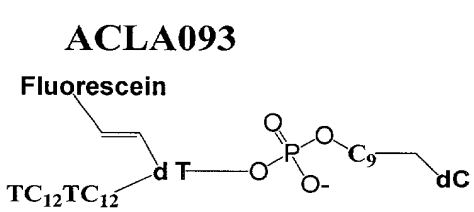
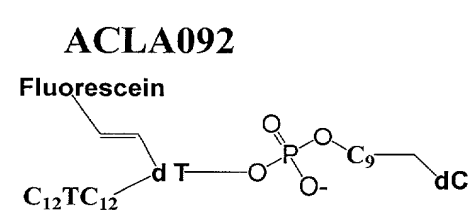
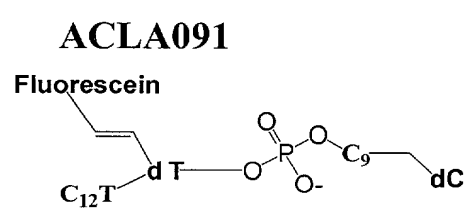
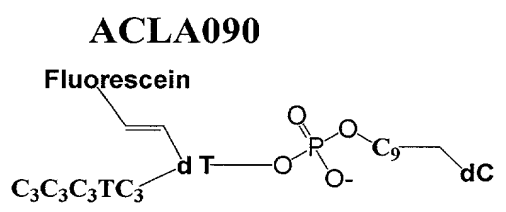
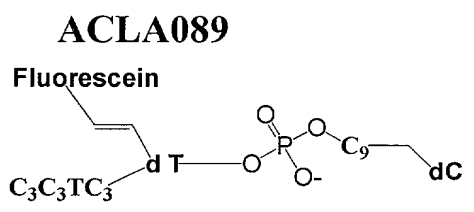
**Fig. 17G**



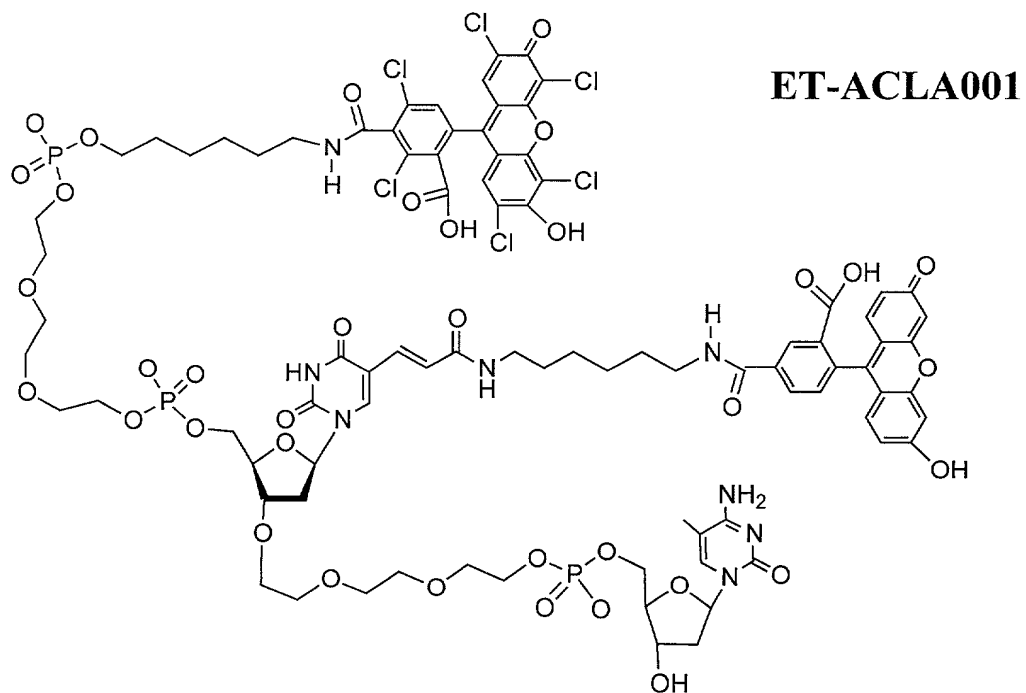


**Fig. 17H**

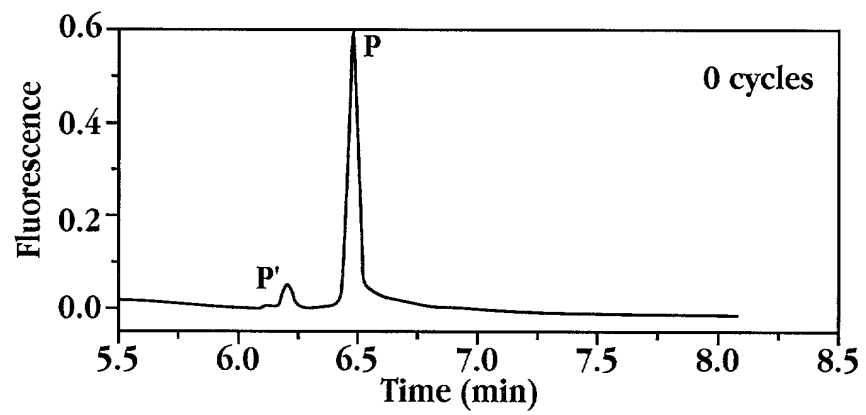
Chemical structures of fluorescently labeled nucleotides and nucleotides with fluorescent labels.



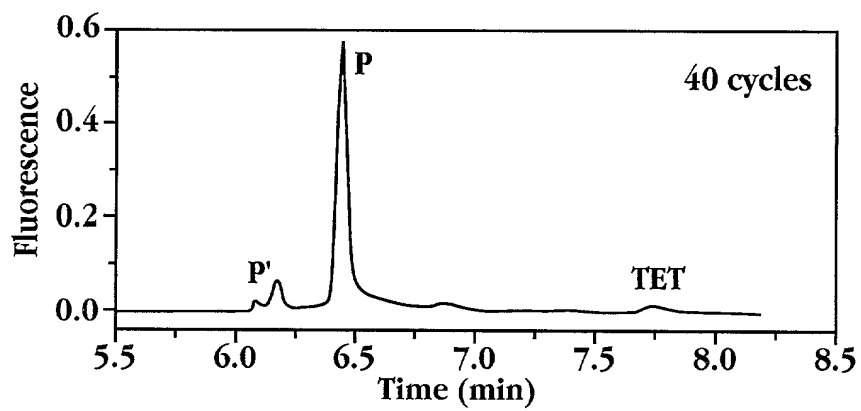
**Fig. 17I**



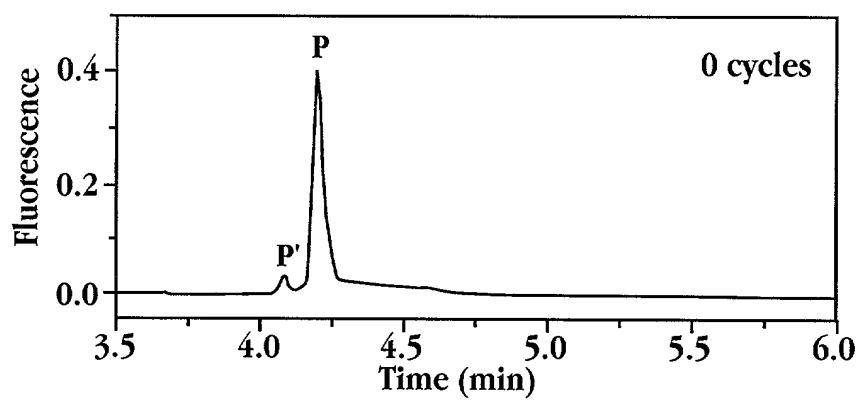
**Fig. 17J**



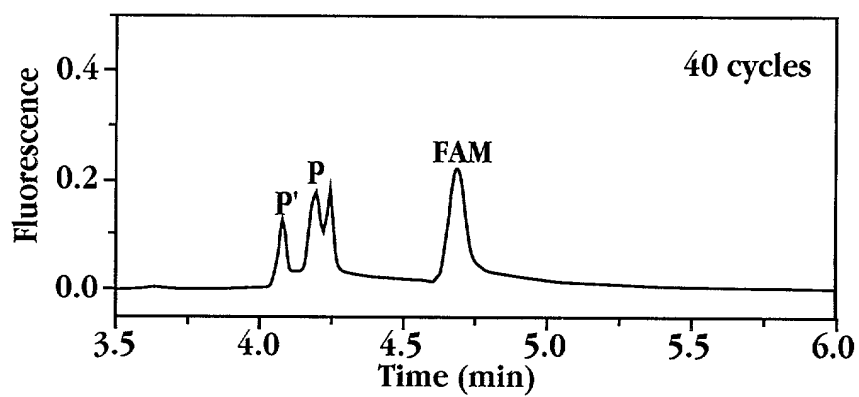
**Fig. 18A**



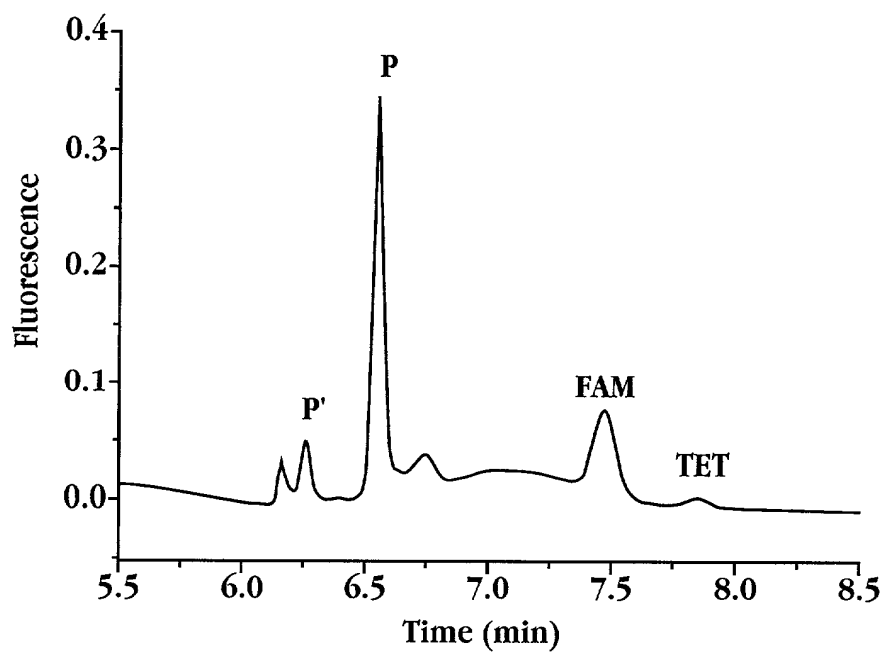
**Fig. 18B**



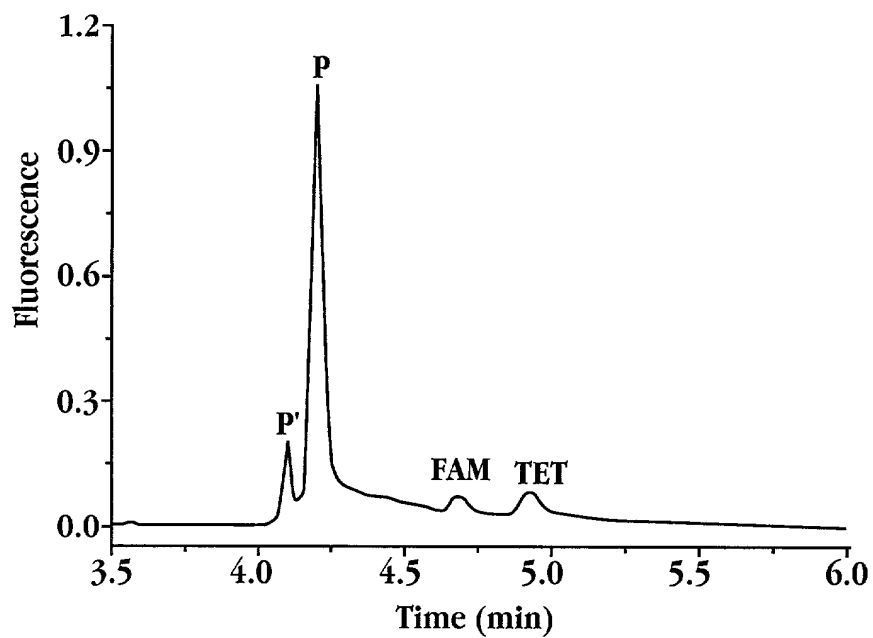
**Fig. 19A**



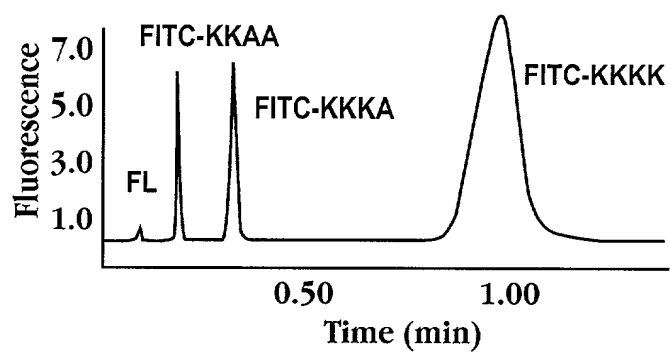
**Fig. 19B**



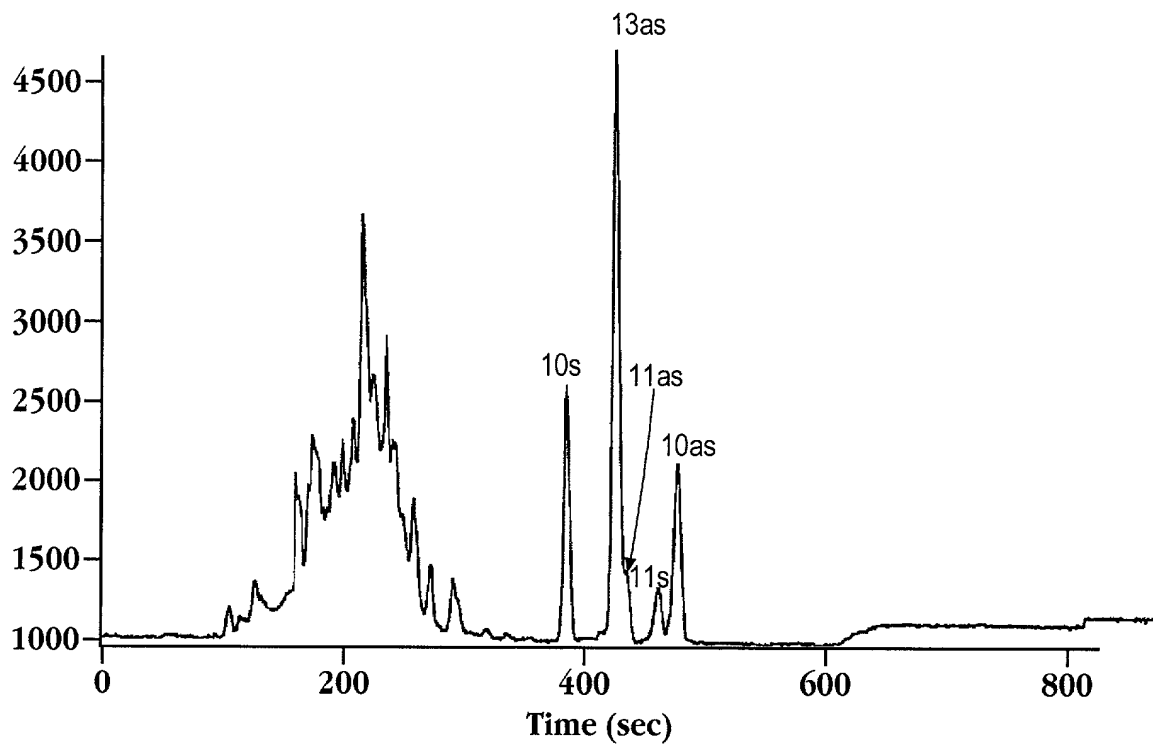
**Fig. 20**



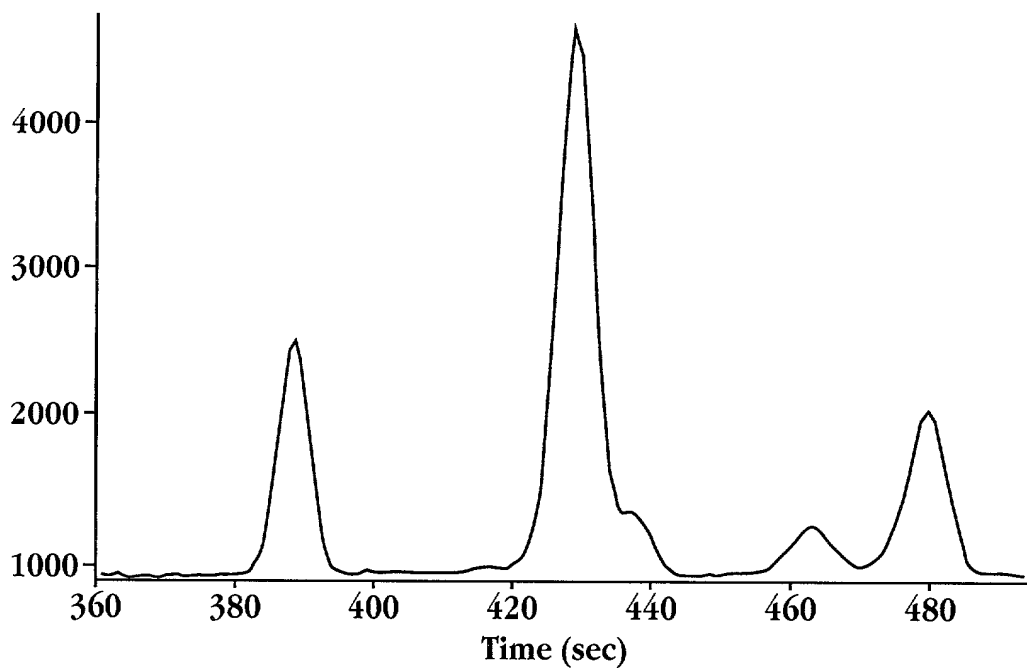
**Fig. 21**



**Fig. 22**

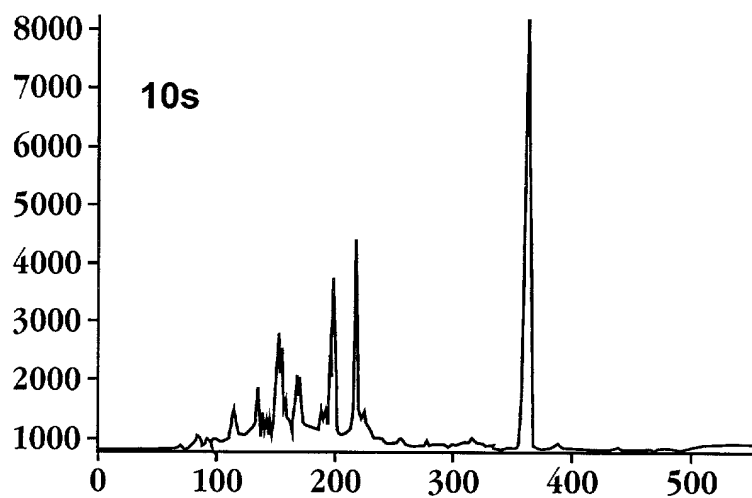


**Fig. 23A**

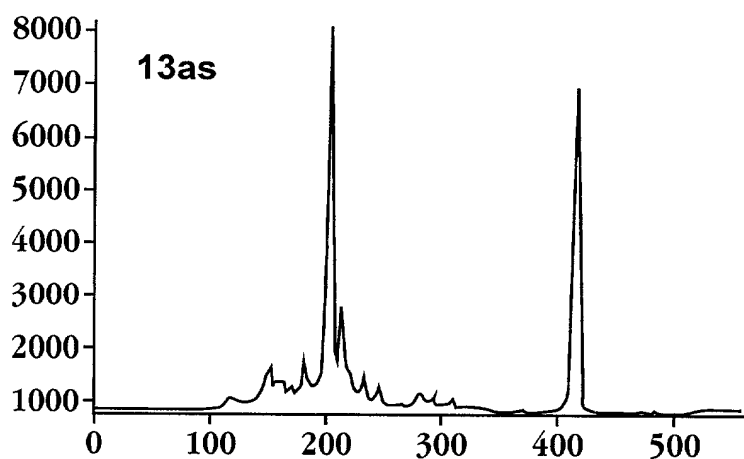


**Fig. 23B**

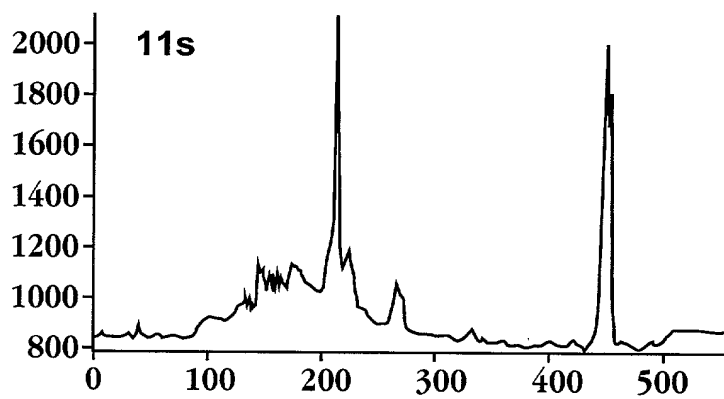




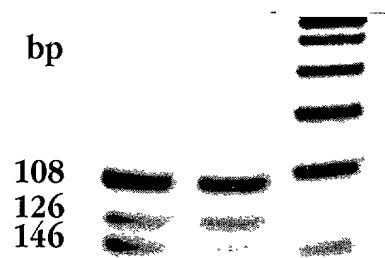
**Fig. 23C**



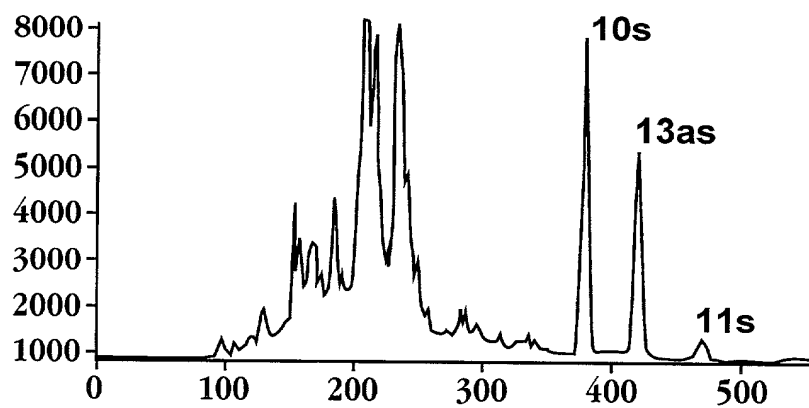
**Fig. 23D**



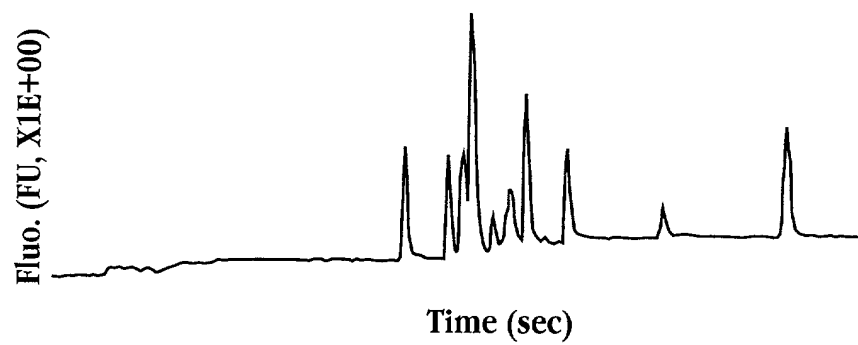
**Fig. 23E**



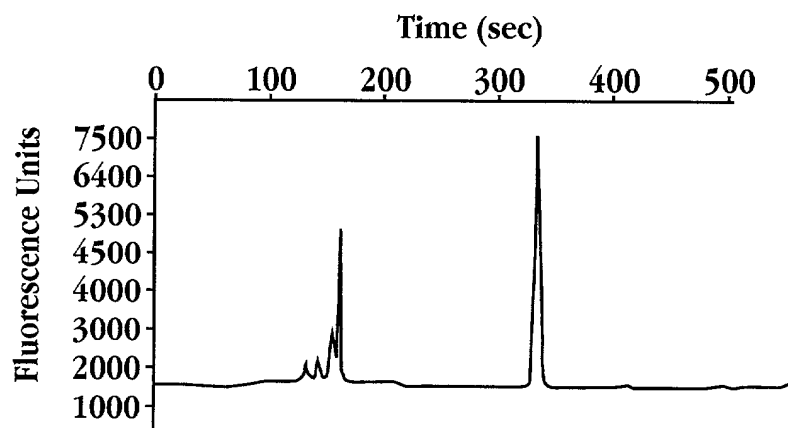
**Fig. 23F**



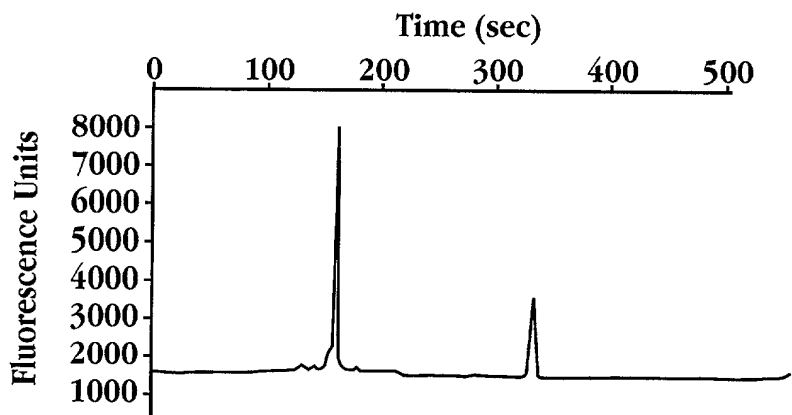
**Fig. 23G**



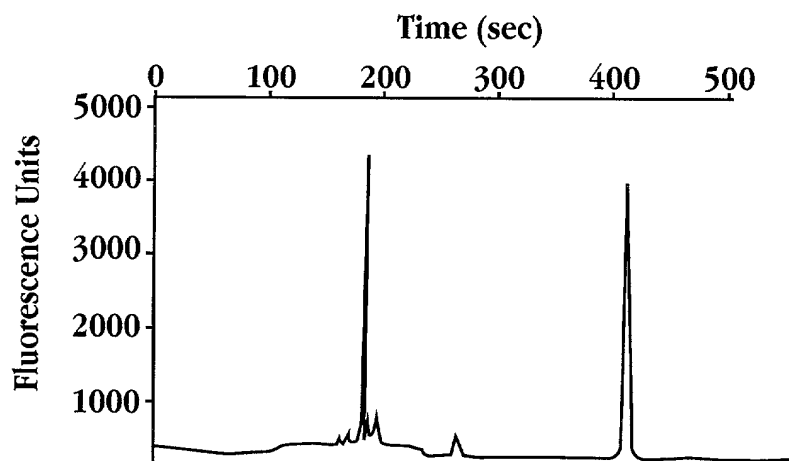
**Fig. 24**



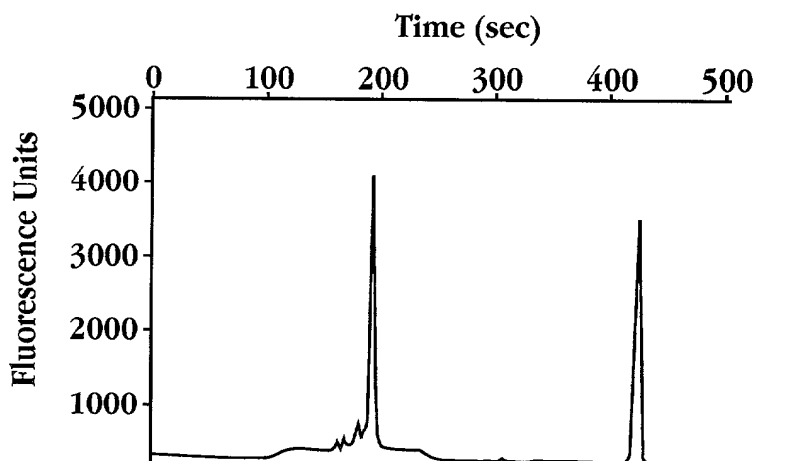
**Fig. 25A**



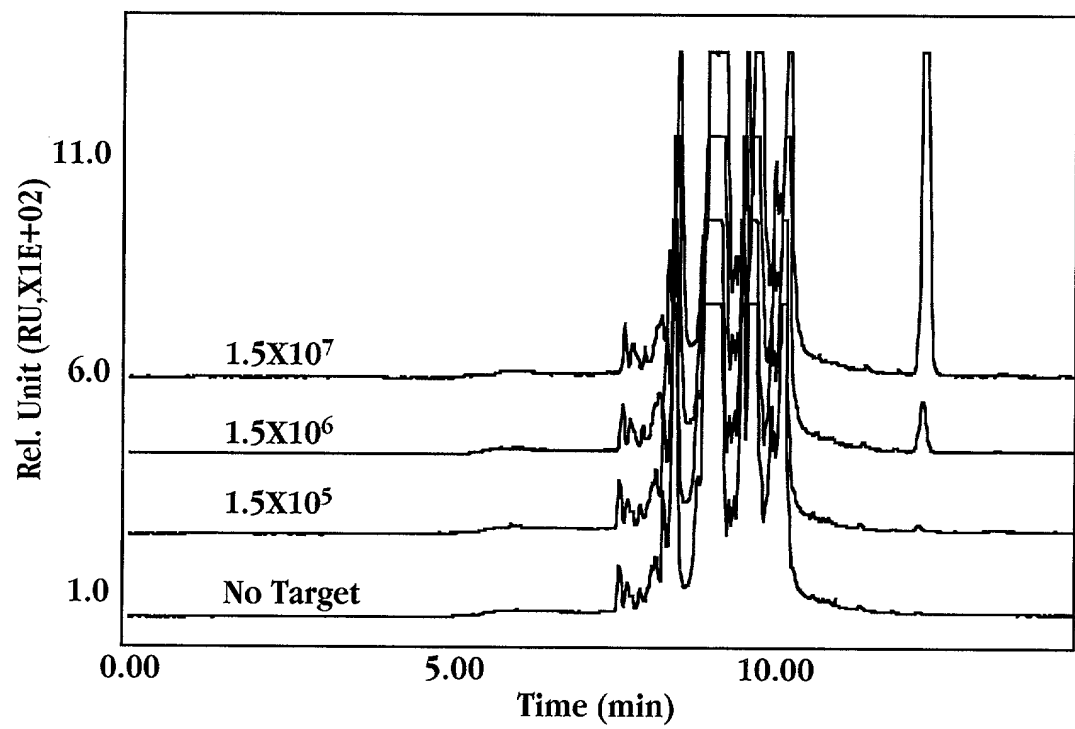
**Fig. 25B**



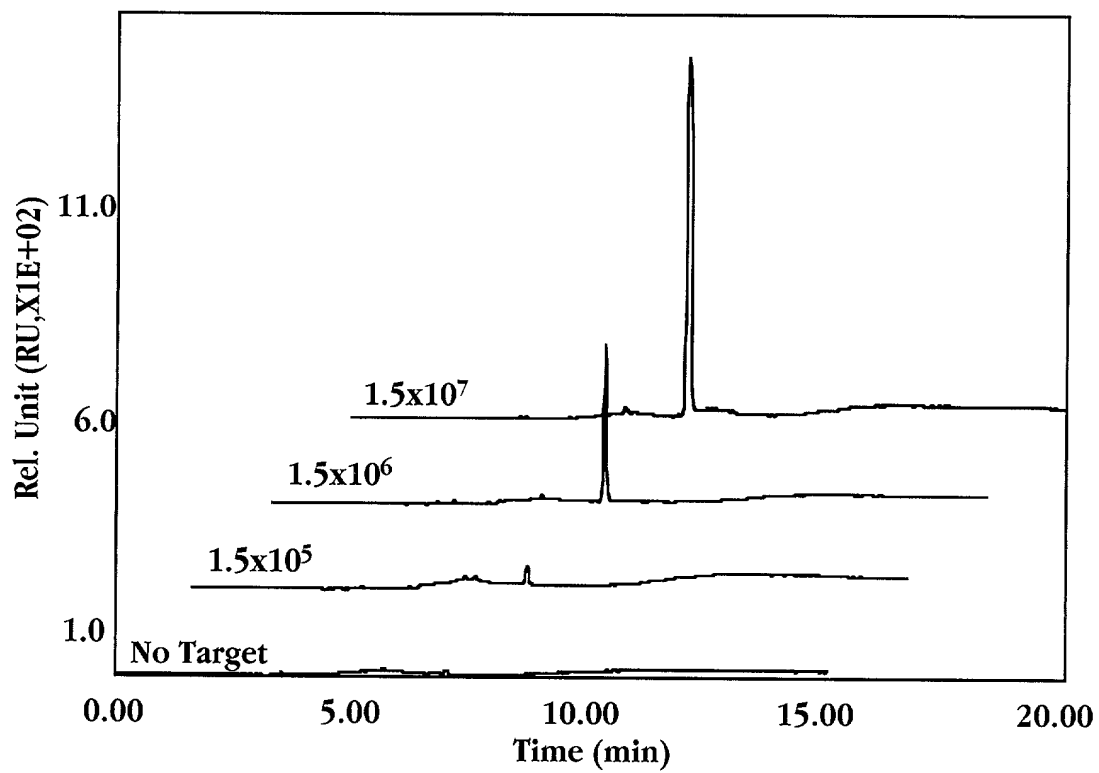
**Fig. 25C**



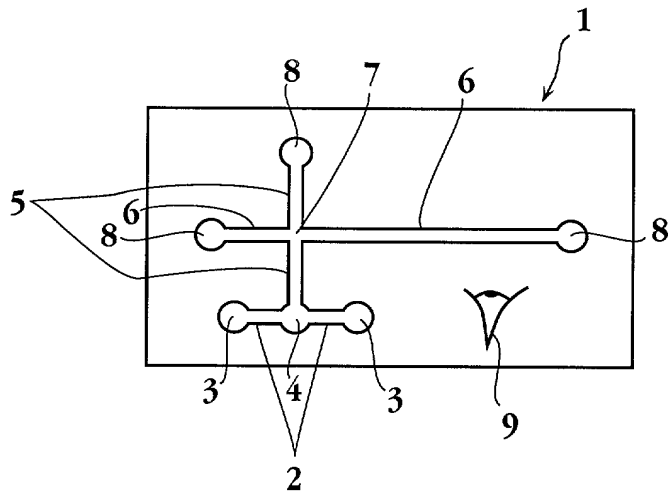
**Fig. 25D**



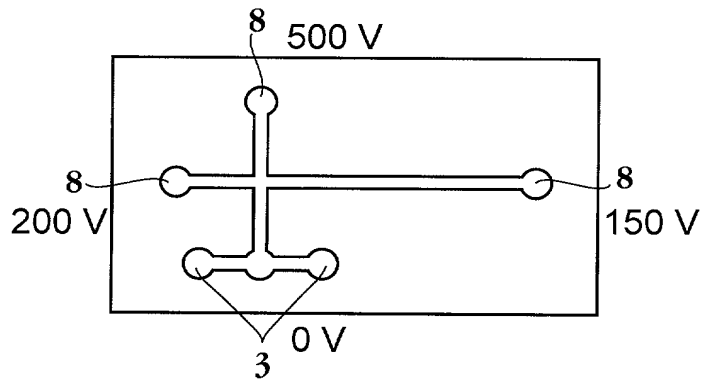
**Fig. 26**



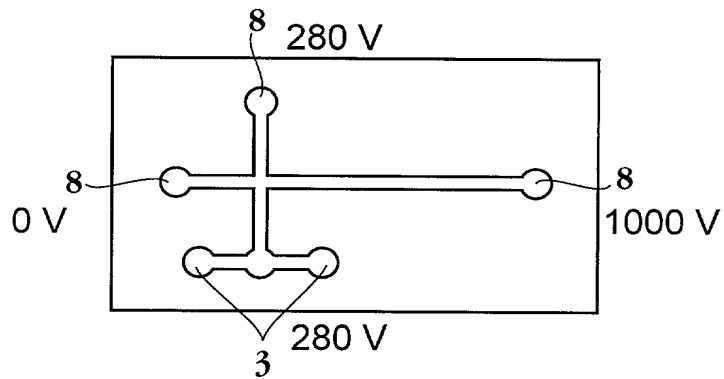
**Fig. 27**



**Fig. 28A**

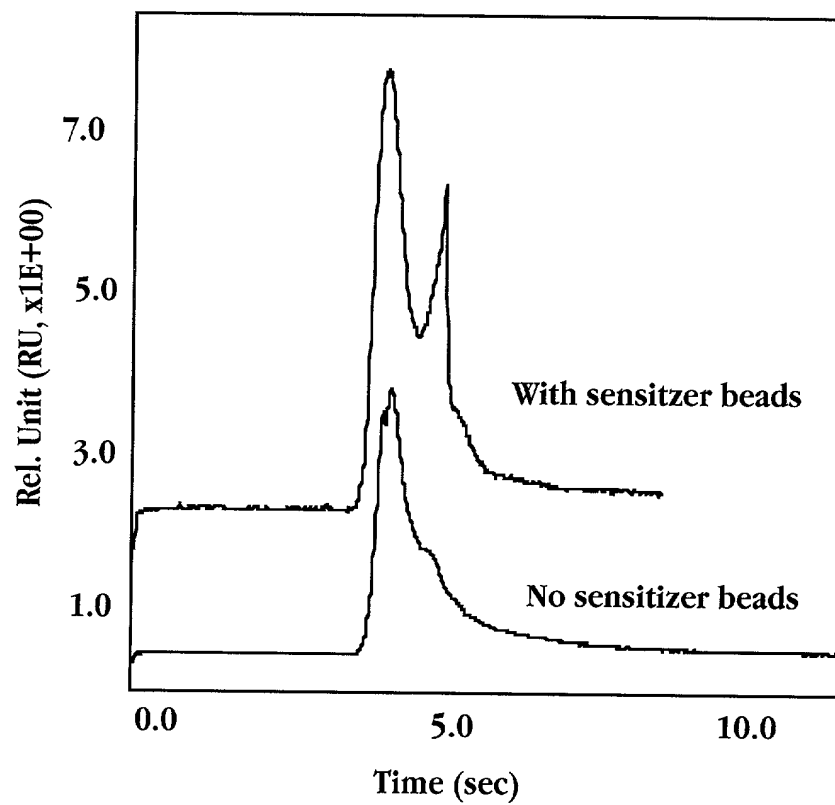


**Fig. 28B**

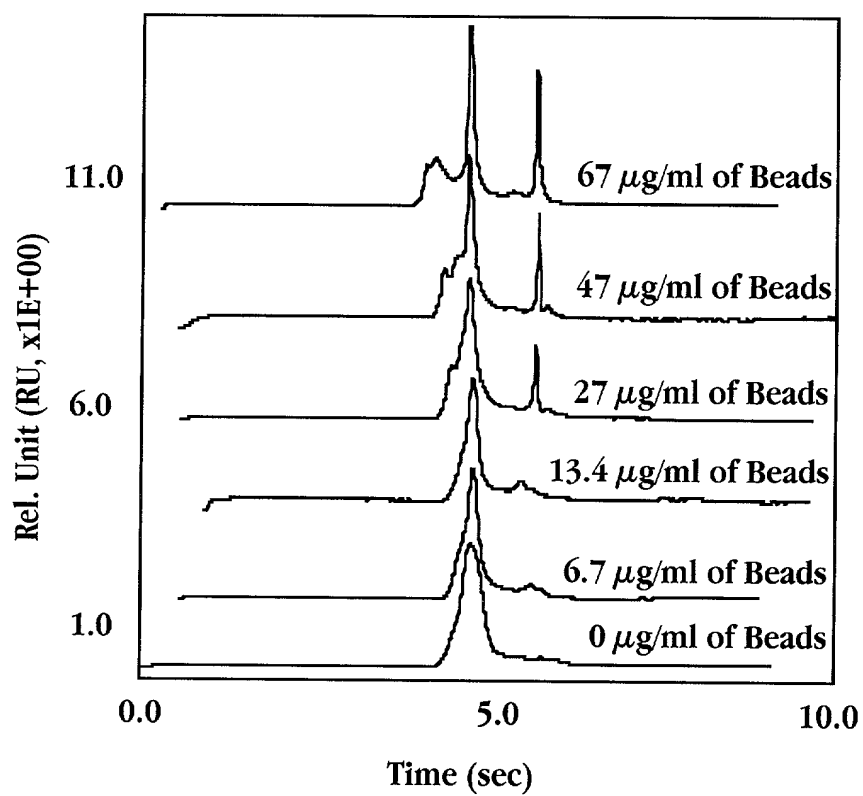


**Fig. 28C**

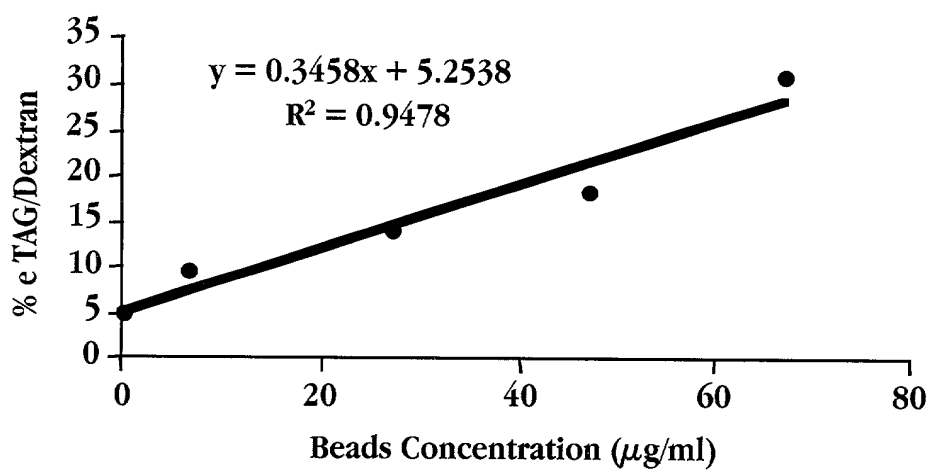




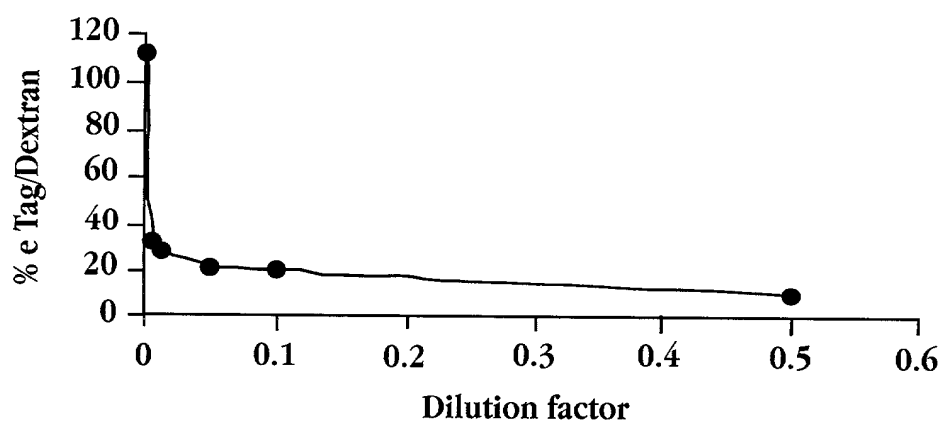
**Fig. 29**



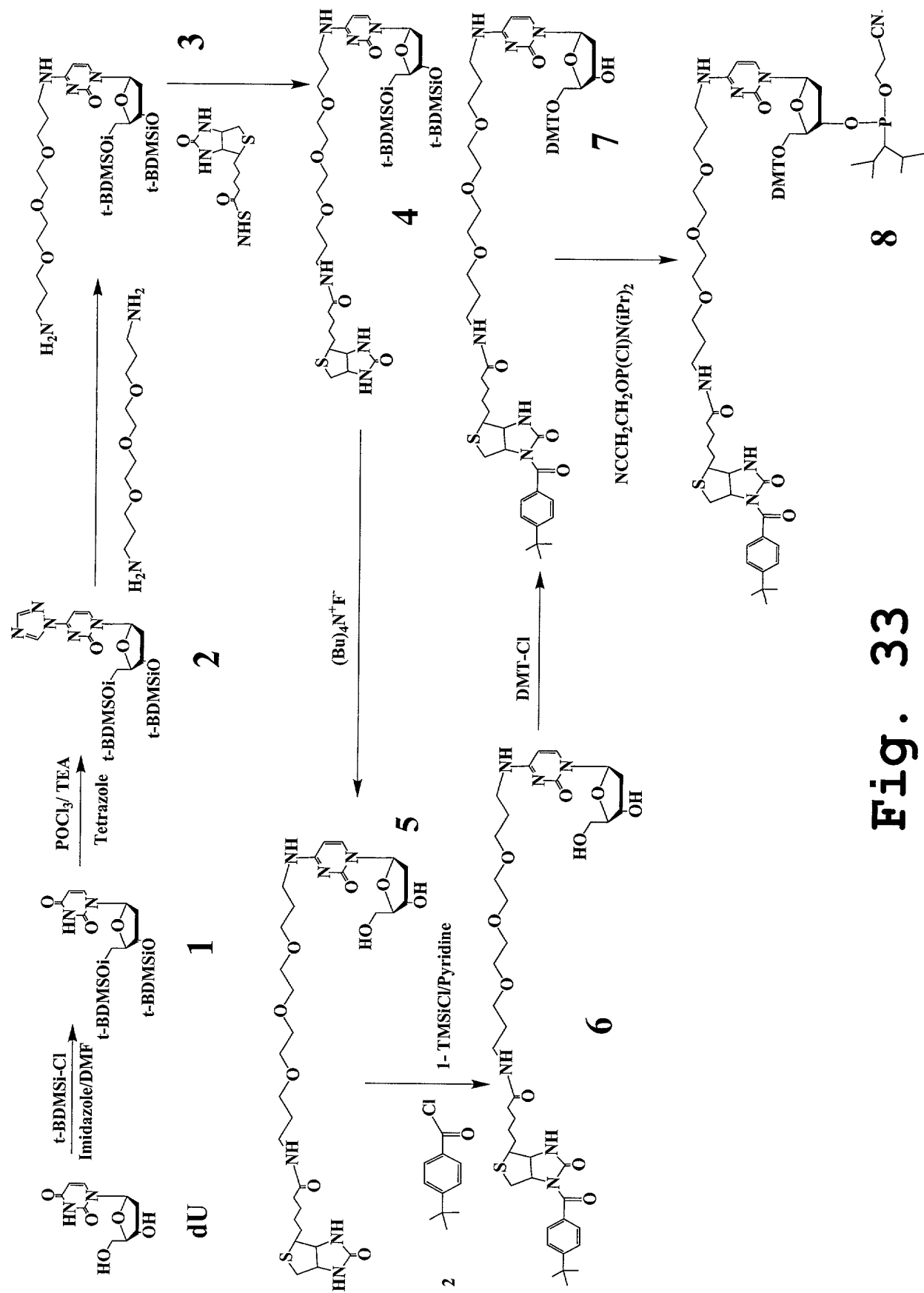
**Fig. 30**



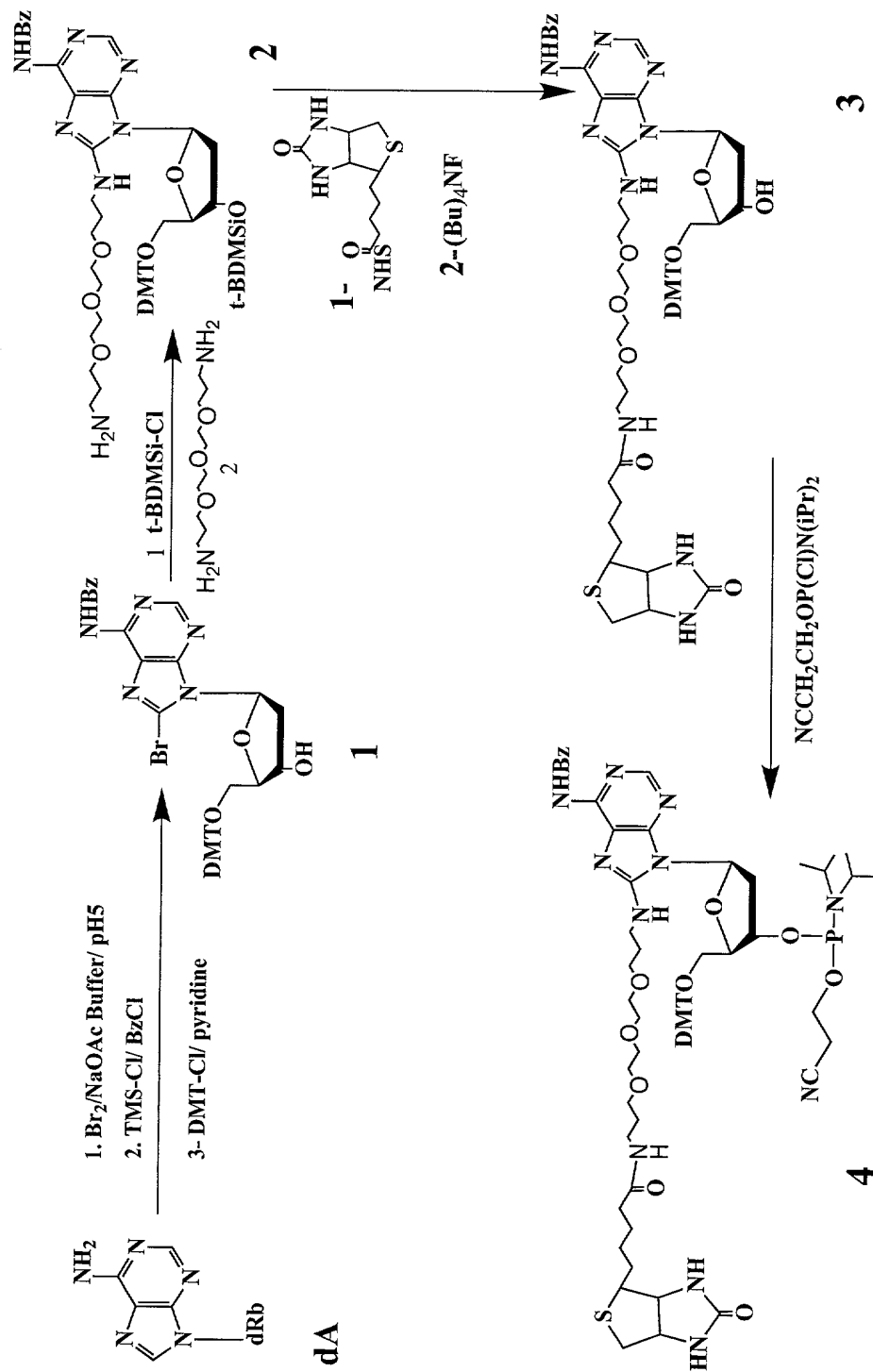
**Fig. 31**



**Fig. 32**



**Fig. 33**



**Fig. 34**